Options Appraisal for a Potential New Settlement [CBRE] - Review

East Devon Draft Local Plan 2020-2040

January 2023

Turley
Planning

Contents

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Our reference
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1. Introduction

1.1 This report has been prepared by **Turley** on behalf of **Bloor Homes South West** ["Bloor Homes"] and **Stuart Partners Ltd** to provide a review of the East Devon – Options Appraisal for a Potential New Settlement (CBRE, October 2022)[1] ["Options Appraisal Report"].

1.2 The Options Appraisal Report is an important part of the evidence base which supports the emerging East Devon Local Plan 2020 to 2040 (Regulation 18 Preferred Options consultation stage[2]); in particular the overall Spatial Strategy (Strategic Policy 1) and the proposals for the development of a Second New Town East of Exeter (Strategic Policy 8).

1.3 Together Bloor Homes and Stuart Partners Ltd own or control substantial areas of land within East Devon's "West End" and they are actively promoting strategic scale new development, which is expected to form a core part of any new town proposal in this area. There has been ongoing engagement with the emerging Development Plan process on this basis, and these parties expect to continue to have a significant involvement as the new Local Plan for East Devon is progressed.

1.4 The Options Appraisal Report outlines the outcome of technical work which has been undertaken to assess potential site locations, having regard to a range of relevant environmental, technical and delivery issues, and concludes by providing a scored assessment of three New Town location options against technical criteria. The Report identified a preferred option (Option 1) and this has informed the preferred option which is included in the emerging draft Local Plan as Strategic Policy 8.

1.5 In order to critically and objectively review the assessment that has been undertaken by the Council, this report provides comments on the overall methodology and approach, and then considers each of the main assessment issues, based on technical assessment and inputs provided by others – relevant further reports and technical notes are included as appendices to this report.

1.6 This review is intended to be helpful to the Local Planning Authority as part of (and to inform) submissions being made to the new Local Plan consultation. It is hoped that, together with other ongoing plan preparation and other technical work, this review and the associated submissions, will help to refine and enhance the evidence base on which policy decisions are being made – assisting with the preparation of a sound Local Plan.

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[1] https://democracy.eastdevon.gov.uk/documents/s18350/East%20Devon%20Options%20Appraisal%20Report.pdf

[2] https://eastdevon.gov.uk/planning/planning-policy/emerging-local-plan/draft-local-plan-consultation/

2. Methodology and Approach

2.1 Although it does not contain any specific 'methodology' section, and there is no separately published methodological approach, the Options Appraisal Report sets out (within Section 3) the approach that has been taken to identifying locations and the assessment criteria which have been used for the appraisal.

Identification of Locations/Options

2.2 The potential location and options assessed in the report have been logically identified having regard to a broad "Area of Search" within the West End (based on land which is free from most significant constraints, and otherwise well located to take advantage of proximity to existing destinations and infrastructure). The identified options are also logically identified based on land which is known to be available, based on the 'call for sites' undertaken by the Council.

2.3 Whilst the full extent of each option does not wholly correlate with areas of common land ownership and control, and/or the extent of sites which are being promoted for development by various parties, it represents a reasonable interpretation of the high-level options which are available. It will be essential that, as part of developing and refining both assessment and policy, boundaries for the New Town allocation are updated and refined.

2.4 Overall, the identified locations are considered to represent a reasonable range of broad options, for the purposes of informing and evidencing the development of policy at this stage.

2.5 Likewise, and as a starting point, the use of high-level land budget assumptions, as set out in Table 3.1, is considered to be reasonable and appropriate. This allows, at a high-level, anticipated scale and land take to be taken into account, having regard to the development, infrastructure and mitigation that will be required as part of proposed New Town, and in the absence of more refined and detailed design for each option. As with the spatial extent and boundaries, it will be necessary (as policy is developed) for the overall land budget to be kept under review and subject to iterative refinement.

Assessment Criteria

2.6 Whilst it is noted that there are some discrepancies (which could be clarified) between the criteria as stated within Table 3.2 and then the detailed scoring set out at Table 3.3, it is considered that the intentions of the assessment framework are clear and the (again at a high-level) the criteria and scoring matrix provides an appropriate basis on which to undertake an objective assessment of the available options, to inform policy development.

2.7 However, what is specifically not covered in assessment methodology (and is otherwise suggested could be developed further in associated Strategic Planning Committee reports) is any weighting or other prioritisation which is to be given to the relevant categories/criteria/scores.

2.8 It may be, for example, that given the climate change and ecological emergencies that have been declared by the District Council, some priority could/should be given to these categories within the assessment, and a weighting applied to these scores. Alternatively, given that accessibility and sustainable transport is a fundamental component of determining the overall sustainability of new development proposals (and is linked to various climate change and other deliver aspects) an enhanced weighting could be given to this aspect. Finally, and reflecting the acknowledged challenges experienced within the first New Town at Cranbrook, it might be that the deliverability criteria is prioritised and weighted more heavily.

2.9 As no specific or detailed weighting has been developed for the assessment at this stage it is not commented on any further, although given the number of different assessment criteria that are being used, it is likely to be appropriate that some degree of relative prioritisation could be usefully applied to both refine the assessment and possibly help to evidence greater objective differentiation between available options (and reasonable alternatives).

Summary

- Overall, it is considered that the broad location, scale and extent of the options presented in the Options Appraisal Report provides and appropriate basis on which to undertake a comparative assessment of available option for a second New Town in East Devon;

- It will be necessary as part of normal policy development for the scale and extent of these options (and especially the preferred option) to be refined as part of iterative development of the Local Plan (alongside any other supporting documents);

- The current assessment is based on a 'flat' assessment of all assessment criteria and scoring with no weighting or prioritisation to reflect the relative contribution or importance of the different criteria, and/or priorities of the Council as part of the plan or other corporate strategies;

- It may be possible to provide a refinement of the Options Appraisal Report based on weighting or prioritisation, which may help to provide greater objective differentiation between available options, or it might be considered that this can be done as part of the development of policy having regard to other tools like Sustainability Appraisal. We would be happy to engage further with the Council on this as part of the plans development to help ensure robustness and a sound approach.

3. Key Assessment Issues

3.1 Reflecting each of the assessment criteria that has been used to inform the overall scoring summary (as at Options Appraisal Report Table 12.13) a review of each topic area (criteria) has been undertaken. These are summarised under relevant headings below, with additional supporting documentation provided within the appendices to this report.

Landscape Sensitivity

3.2 A landscape review of the Options Appraisal Report has been undertaken by EDP and their findings are set out within the Technical Note that is at **Appendix 1**. This includes review of the supporting Landscape Assessment undertaken by Fiona Fyfe Associates.

3.3 Overall, the landscape review has found that the Options Appraisal represents a robust and proportionate approach for this stage of the Local Plan process, with the overall findings of the landscape evidence being presented in a clear and well-structured manner.

3.4 The review has found a lack of discernible distinction between the options, with any variation which can be identified being marginal. There does not appear to be compelling evidence on which to base the assessment of Option 1 as Medium/High sensitivity and Option 3 as Medium sensitivity.

3.5 Table 3.1 below sets out alternative scoring for the Landscape Sensitivity criteria based on the marginal distinction to be made by the evidence and assessment. All options are now scored with overall Medium sensitivity.

Table 3.1: Landscape Sensitivity review scores (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment category	Option 1	Option 2	Option 3
Landscape Sensitivity	3 (2)	3 (2)	3 (3)

Ecological Impact and Biodiversity

3.6 An ecological review of the Options Appraisal Report has been undertaken by EAD Ecology ["EAD"] and their findings are set out within the Technical Note that is at **Appendix 2**.

3.7 Overall, the ecological review that has been undertaken agrees with the findings of the Options Appraisal Report in that there are no over-riding ecological constraints to the development of any of the assessed site options (1-3). However, the ecological review has identified amendments to the impact scores associated with each option, which it is considered more accurately and robustly reflects that actual merits of (impacts associated with) each site, with reference to the relevant assessment criteria and scoring.

3.8 The adjusted scoring, based on the commentary and justification provided within the review, is presented within **Table 3.1** (of **Appendix 2**) suggests that the (average total) scores for Options 1 and 2 should be increased (to **3.9** and **3.7** respectively) with the score for Option 3 reduced to **2.8**.

3.9 As set out in the original Options Appraisal Report the review confirms that Options 1 and 2 are similar in respect of anticipated impact level, with the principal difference and change advocated by this review being the location of Option 1 outside of the recreation-impact catchment zone associated with the Dawlish Warren SAC, SSSI and NNR. Additionally, scores for both options (1 and 2) have increased as a result of this review (compared with the Options Appraisal Report) due to the removal of UWSs and the Clyst Valley Regional Park from consideration of impacts on Local Wildlife Sites.

3.10 The ecological review reconfirms that Option 3 has the highest ecological impact (as in the original Options Appraisal Report), albeit the score for this option is suggested to decrease further (i.e. increased impact) due to greater significance being placed on the location of Option 3 within 400m of the Exe Estuary SPA, SSSI and Ramsar sites, as well as the ecological network of habitats associated with the Clyst Valley.

3.11 The revised (and original) scoring for the Ecological Impact and Biodiversity criteria are set out in the table below:

Table 3.2: Ecological review impact summary scores (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment category	Option 1	Option 2	Option 3
Statutory wildlife sites of international and national significance	5 (5)	4 (4)	2 (3)
Strategy 47 applies (Recreational pressure)	4 (3)	3 (3)	2 (2)
SSSI Impact Risk Zones	5 (5)	4 (4)	2 (3)
Statutory wildlife sites of regional/local significance	5 (5)	4 (5)	4 (5)
Local wildlife sites	5 (3)	5 (3)	5 (5)
Potential impact on Wildlife Sites Network	2 (2)	3 (3)	3 (3)
National or Devon Priority Habitats	3 (2)	3 (3)	3 (2)
Overall risk to ecological network	3 (3)	4 (4)	2 (2)
Diversity of protected/notable species	3 (3)	3 (3)	2 (2)
Total	**35 (31)**	**33 (32)**	**25 (27)**
Average	**3.9 (3.4)**	**3.7 (3.6)**	**2.8 (3.0)**

Environmental Constraints

Flood Risk

3.12 In respect of Flood Risk, the Options Appraisal has scored all Options equally on the basis of Low/Medium Risk/Impact. This is on the basis that all options have land within Flood Zones 1-3, but as the majority of is within Zone 1 flood risk will be incorporated and managed as part of well designed and implemented drainage strategies for all options, as well as the use of land for open space and habitat mitigation/enhancement. Given this and following some further review by the project team's flood risk and drainage engineers, it is agreed that there is no discernible difference between the appraised options in respect of flood risk issues, and so no further comments are made and no adjustment to scoring has been suggested.

Minerals

3.13 The Options Appraisal Report considers each of the site options with reference to minerals by considering both the adopted East Devon Local Plan (2013-2031), as well as the Devon Minerals Plan 2011-2033 and the Devon Waste Plan 2011-2031.

3.14 The range of scores given for this criteria is the largest of any within the assessment, albeit were any weighting or prioritisation being applied we would anticipate this to be a topic/criteria that would not attract additional weight or priority.

3.15 Option 3 is scored highest (5 – Low level of constraints) based on being outside of any designated coal mining affected areas and with no nitrate of phosphate issues having been identified. Option 1 has been scored as 3, based on a Medium level of constraints – this difference is attributable only to the presence of the following designated sites:

(a) Mineral safeguarding Zone at Hill Barton Business Park (Policy M2 of the Devon Minerals Plan); and
(b) Established Strategic Waste facility at Hill Barton Business Park (Policy W10 of Devon Waste Plan).

3.16 There is potential that the existing uses at these designated sites would have impacts on (and constrain) and proposed nearby development as part of the New Town, or conversely there is potential that new development delivered in the vicinity of these sites (and without adequate thought to design and mitigation) could cause issues for the long-term operation of these sites (or impose additional constraints). It remains the case that vast majority of the Options 1 site is unaffected by any Minerals related constraints or issues, in common with Option 3.

3.17 On this basis and to better understand the possible constraint that is proposed by these designated sites further high-level Noise and Air Quality Assessment has been undertaken by Wardell Armstrong to inform this review and this is provided at **Appendix 3** (Noise) and **Appendix 4** (Air Quality).

3.18 In respect of noise, the technical review (Appendix 3) identifies that it is unlikely that existing noise sensitive receptors would experience significant adverse impacts during the construction phase, and these impacts are likely to be the same (or very similar) for all options. It is also identified that a variety of standard mitigations will be required to take account of identified noise sources throughout the Option 1 assessment area

(including and noise associated with existing industrial operations on the allocated/safeguarded sites), although a variety of typical mitigation measures can be employed to ensure that any possible noise impacts are mitigated and minimised.

3.19 In respect of Air Quality, the technical review (**Appendix 4**) summarises construction stage impacts (which will be the same or similar for all Options) and considers the allocated/safeguarded waste and mineral sites that are identified in the Options Appraisal Report, as well as other know uses nearby. Overall, it is concluded that whilst there are some potential impacts which would arise from these sites, the fact that they are operated based on Management Plans and relevant permits, meaning that relevant restrictions and controls will already be in place to mitigate and minimise any impacts on sensitive receptors. Together with sensitive masterplanning that considers any proximity to these uses (via the use of stand-offs, or the consideration of the dispersal of different new land uses) any impacts (and therefore this constraint) would be minimised.

3.20 Given the above it is not considered that a variance of 2 is justified in the scoring of this criteria (Minerals), and that the constraint level of Option 1 should be assessed as Low/Medium resulting in a score of 4 (rather than 3). This is on the basis that most of the area is unaffected by any relevant minerals issues, and the presence of allocated/safeguarded sites has (whilst clearly of relevance) been assessed as unlikely to result in a significant or substantial level of constraint, with a range of standard mitigation measures possible. It remains appropriate that Option 3 is assessed as having a Low level of constraint, given the absence of these allocated/safeguarded sites.

Historic Environment

3.21 All options have been assessed as having a medium risk on the historic environment (with a score of 3 being consistently applied), with in each case potential for mitigation as part of masterplanning. This overall assessment and the conclusions/scoring are agreed and no further, more detailed assessment of this criteria has been undertaken.

Sustainable Accessibility

3.22 A review of Sustainable Accessibility as set out in the Options Appraisal Report and associated Hydrock document "East Devon New Community – Sustainable Access Review of Option Sites" has been undertaken by Jubb and their findings are set out within the additional report that is at **Appendix 6**.

3.23 Based on a review of the following assessment categories it is concluded that the scoring should be adjusted as shown within Table 3.2 below:

- **Walking Connectivity**- Option 1 is located in close proximity to the committed development set out within the Cranbrook Plan that will bring more facilities and employment in close proximity to the north of the A30 which would be accessible by active modes of transport, including walking;

- **Cycle Connectivity** – Option 1 has the advantage of being located adjacent to connecting active travel links to the north that provide access across the M5 and to nearby employment. These routes are more direct and provide connection to

a key pedestrian/cyclist draw (i.e. key employment) which is in contrast to links connecting with Option 2 and 3 that, in the vicinity of the sites, do not connect with key Exeter destinations.

- **Public Transport Connectivity** - Option 1 proposals would allow the introduction of a Park & Ride site along the A30, via an existing high-quality grade separated junction. Whilst Option 2 could also provide a Park & Ride site on the A376 space for high quality junction connection is more limited.

- **Employment Context** - The Hydrock Report correctly identifies the key advantages of the Option 1 site in terms of employment given that it is in close proximity to not only Hill Barton and Greendale Business Parks but also, unlike Option 2 and 3, Exeter SkyPark, Science Park and Airport. However, what should also be considered is the additional employment that will be provided in the Cranbrook Plan which included approximately 5ha of employment within the Treasbeare Expansion Area.

Table 3.3: Sustainable Accessibility summary scores (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment Category	Option 1	Option 2	Option 3
Walking	4 (3)	1 (1)	4 (4)
Cycling	4 (3)	2 (2)	3 (4)
Public Transport	5 (4)	2 (2)	5 (5)
Employment	5 (5)	2 (2)	3 (4)
Total	**18 (15)**	**7 (7)**	**15 (17)**
Average	**4.5 (3.8)**	**1.8 (1.8)**	**3.8 (4.3)**

Highways Impact

3.24 A review of Highways Impact as set out in the Options Appraisal Report and associated WSP Highways Impact Modelling Report has been undertaken by Jubb and their findings are set out within the additional report that is at **Appendix 6**.

3.25 Whilst the scores within the EDOA report do identify Option 1 as scoring higher for highways, given that Option 1 is the only option that is assessed within the WSP report as not requiring significant offsite mitigation it is considered that a higher relative score should be attributed to this option. Furthermore, there are also several additional considerations that would enhance the score of Option 1 relative to Option 2 and 3 including the fact that the location of Option 1 (between the A30 and A3052) would enable a dispersion of traffic, unlike Option 2 and 3 that are concentrated on routes southwest of Exeter that converge at the Clyst St Mary Roundabout and Junction 30 of the M5.

Table 3.4: Highways Impact summary scores (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment Category	Option 1	Option 2	Option 3
Highways Impact	4.8 (4.8)	3.1 (4.1)	3.6 (4.6)

Utilities

3.26 The Options Appraisal Report has considered utilities in respect of capacity and opportunities for connection, foul drainage and capacity/opportunity for connection and impact on existing infrastructure.

3.27 Option 1 has been scored most highly, based on a Medium impact, where there are both good opportunities for utility connections, and less likelihood of significant impacts on existing utility infrastructure, which has been assessed for Option2 (based on the presence of high-pressure gas mains and extra high voltage electricity cables.

3.28 No further detailed assessment has been undertaken and no adjustment has been made to the assessed scores.

Net Zero Carbon and Climate Resilience

3.29 A review in respect of the Net Zero Carbon and Climate Resilience criteria has been undertaken by Turley Sustainability and their findings are set out within the briefing note that is at **Appendix 7**. This review has specifically considered Appendix F to the Options Appraisal Report which comprises the Hydrock Zero Carbon Assessment (found at Appendix F to the Options Appraisal Report).

3.30 Ensuring that the New Settlement to the East of Devon meets the net zero policy of the Local Plan and the local climate emergency is a key objective. Appendix F demonstrates that all three development options can make a strong contribution to net zero.

3.31 Prior to this review, the Hydrock Report identified that Option 1 had the potential to make the strongest contribution to Net Zero following by Option 3 and then 2. Option 2 was identified as making the strongest contribution to Climate Resilience following by both Option 1 and 3.

3.32 The Consortium have reviewed the assessment within Appendix F and make the following comments:

(i) The Denbow Energy and Carbon Strategy provides detailed evidence of the commitment of the Consortium to creating an exemplar energy strategy. This document clearly supports the conclusion that Option 1 has the most significant potential to utilise its assets (energy generating plant) to create a decentralised energy network which could make a very strong local and regional contribution to net zero.

(ii) Using this evidence the Consortium believe that the Net Zero scores should be amended to:

- Option 1 would increase to 13;
- Option 2 would increase to 8; and
- Option 3 would remain at 9

(iii) With respect to the assessment of Climate Resilience the Consortium believe that there are justified amendments to the Soil Erosion (Water) category which would change the total scores to:

- Option 1 would increase to 20;
- Option 2 would increase to 24; and
- Option 3 would decrease to 17.

3.33 Based on the above scoring adjustments the final 'average' assessment score for each criteria would also be adjusted.

Deliverability

3.34 In respect of deliverability the Options Appraisal Report presents (within Section 10) commentary on a range of matters which may be relevant to scheme delivery, albeit the Assessment Criteria and Scoring (Table 3.3) references only land ownership, call for sites submissions and the presence of existing business which may need to relocate. The assessed score for deliverability (Table 12.12) is also only based on Land Ownership and Existing Land Use Considerations.

3.35 On this basis it is these matters that have been considered for the purposes of this review, with other matters generally already being accounted for as part of other criteria (in terms of both suitability and deliverability considerations).

3.36 The assessed scores for Deliverability clearly favour Option1, with Option 3 being least favoured, having regard to the assessment criteria. This is considered to be accurate, based on the substantial control which exists within Option 1 (two main parties promoting comprehensive and co-ordinated development, including key linkages), which contrasts with Option 3 which is assessed to comprise many (and unknown) ownerships, and where significant land assembly is likely to be required.

3.37 On this basis no adjustment has been made to the assessed scores for Deliverability as presented within the Options Appraisal Report.

4. Summary and Conclusions

4.1 This review has considered the Options Appraisal Report prepared by CBRE and which has in turn informed the 'preferred option' (Option 1) for a Second New Town which is subject to consultation as part of the new East Devon Local Plan.

4.2 Whilst the original assessment identified Option 1 as the most highly scoring and therefore 'preferred' option based on this assessment, the Options Appraisal Report recommended that both options (1 and 3) be consulted on by East Devon District Council, based on the marginal difference between the overall scores. The difference between Options 1 and Option 3 in the assessed scores within the Options Appraisal Report is on 0.1.

4.3 On the basis of the review provided in this report, including the additional technical evidence and justification that has been provided within the documents that are appendices, an updated and adjusted scoring for the three options is included at Table 4.1 below. Score which have been increased are shown in green and those that are reduced are shown in red, the previous (original) assessment scores are given in brackets for ease of comparison.

Table 4.1: Overall Assessment Scoring as updated by review (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment Category	Option 1	Option 2	Option 3
Landscape Sensitivity	3 (2)	3 (2)	3 (2)
Ecological Impact/Biodiversity	3.9 (3.4)	3.7 (3.6)	2.8 (3)
Flood Risk	4 (4)	4 (4)	4 (4)
Minerals	4 (3)	1 (1)	5 (5)
Historic Environment	3 (3)	3 (3)	3 (3)
Sustainable Accessibility	4.5 (3.8)	1.8 (1.8)	3.8 (4.3)
Highways Impact	4.8 (4.8)	3.1 (4.1)	3.6 (4.6)
Utilities	3 (3)	2.3 (2.3)	2.3 (2.3)
Net Zero Carbon	4.3 (3.3)	2.6 (2.3)	3 (3)
Climate Resilience	2.9 (2.7)	3.4 (3.4)	2.4 (2.7)
Deliverability	4.5 (4.5)	3 (3)	2.5 (2.5)
TOTAL	**41.9 (37.5)**	**30.9 (30.5)**	**35.4 (37.4)**

4.4 As can be seen within the Total scores at the foot of Table 4.1 the review score has resulted in a much clearer and more substantial distinction being possible between Option 1 and Option 3 (now 6.4 points) as compared to the marginal position within

the Options Appraisal Report. The difference is also set out for clarity in Table 4.2 below.

Table 4.2: Summary of Adjusted Total Scoring based on Turley Review (Jan 2023)

	Option 1	Option 2	Option 3
Original Assessment Total (CBRE)	37.5	30.5	37.4
Review Total (Turley)	41.9	30.9	35.4
Difference	**4.4**	**0.4**	**-2**

4.5 It is considered that the updated and adjusted scores presented in this review provide an objective and accurate critique of the CBRE Options Appraisal Report, and assessment of the merits of each Option against the stated assessment criteria.

4.6 As per the outcome of this assessment, this reflects our assessment (also reflected in previous assessment work submitted to the Council) that Option 1 represents a clear preferred option for the location of a Second New Town within East Devon.

4.7 Whilst this assessment has identified that Option 1 should be more clearly assessed as the 'preferred' (first choice) site option based on the criteria used in the assessment (which are agreed to those that are most relevant for plan and policy making), it is also relevant that this assessment is based on 'flat' scoring system with no weighting or other prioritisation applied. If relevant weighting were to be applied that favours key criteria such as Net Zero, Sustainable Accessibility and/or Deliverability, then it is likely that Option 1 would be even more clearly demonstrated to be the preferred option, given that it scores most highly against these criteria (based on the adjusted Turley review scoring).

4.8 This review has been provided to inform responses and representations to the new East Devon Local Plan consultation, and it is hoped that it is helpful for the Council when reviewing and progressing the Local Plan. We would be happy to discuss any aspects further with the Council to further assist the plan making process.

Appendix 1: Landscape Technical Note (EDP, January 2023)

Land at Wroford Farm, Exeter
Landscape and Visual Technical Note
edp4347_r006

1. Introduction and Scope

1.1 The Environmental Dimension Partnership Ltd (EDP) has been commissioned by Bloor Homes and Stuart Partners to undertake a landscape review of the report entitled 'East Devon – Options Appraisal for a potential New Settlement' (CBRE, 2022; hereafter referenced as the 'Options Appraisal Report'). A Landscape Assessment (Fiona Fyfe Associates, 2022); hereafter referenced as the 'Landscape Assessment', is appended to the Options Appraisal Report (Appendix A); this document has also been included in the landscape review. Bloor Homes and Stuart Partners share significant land control within the area identified as Option 1 within the Options Appraisal Report.

1.2 The 'New Community' is described within the CBRE Options Appraisal Report as follows:

"A second new settlement in East Devon with a self-sufficient, healthy and dynamic community with distinctive character. Delivering up to 8,000 high-quality homes with a range of tenures, places of work and a diverse mix of uses that are easily accessible via sustainable and active travel such that these become the dominant transport modes.

This new town will be more than just a settlement, it will be an ambitious and highly desirable place that supports the growth of a self-governing and self-sustaining community that establishes its culture at the outset in order to develop and thrive into the future.

The structure of the settlement will promote innovative design that will draw inspiration from the local context, including the unique surrounding historic environment, to create a rich character. Streets and spaces will be designed to encourage social interaction and will be embedded in a well-connected and integrated active travel network with comprehensive links to nearby employment, surrounding countryside and the city of Exeter.

It will be underpinned at its core by sustainability, wellbeing, and healthy living, creating an exemplar zero-carbon town both in terms of self-sufficiency and design and by doing so it will provide a legacy to the benefit of future generations.

This sustainable community will be sensitively and seamlessly integrated with the outstanding East Devon natural environment and contribute to the delivery of the Clyst Valley Regional Park whilst protecting nearby internationally recognised habitats.

It will provide a rich network of substantial open space and diverse landscaping, including areas of enhanced ecology and biodiversity, as well as opportunities for play, recreation and opportunities for food growing.

This vibrant and adaptable new settlement will preserve East Devon's legacy as an outstanding place to live. The use of local materials and labour will be promoted to deliver on local priorities, creating somewhere residents can be proud of and where people of all ages and lifestyles will prosper."

1.3 There were three options considered as part of the Evidence Base, named Options 1, 2 and 3. As above, the site considered within this Technical Note is that referred to as Option 1, as broadly illustrated on **Image EDP 1**.

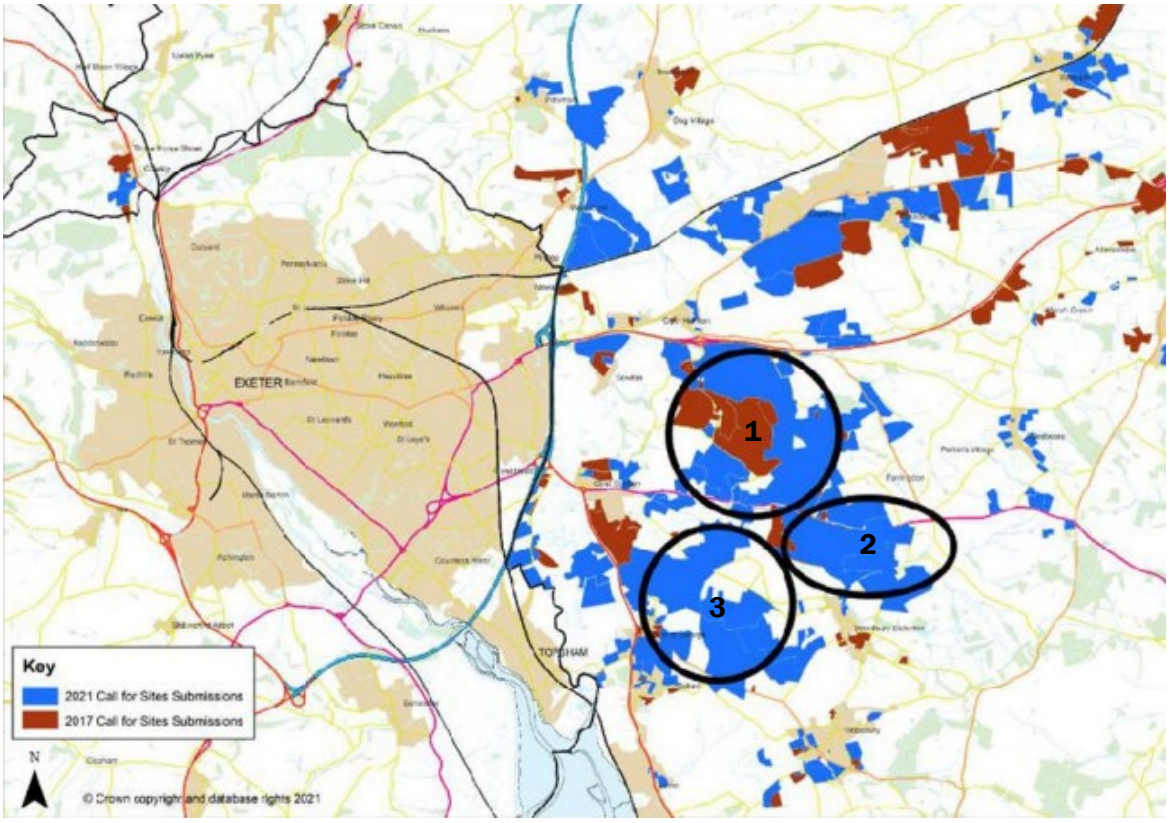

Image EDP 1: Extract from the CBRE Report, showing the broad locations of the three Options appraised.

1.4 As part of the technical appraisal, the areas referred to as Options 1, 2 and 3 differ slightly from the initial geographical identification shown on **Image EDP 1**, with areas of overlap provided in respect of Options 1 and 2. The areas of search for each option are provided on **Image EDP 2**, and as can be seen the landscape to the north and north-east of Crealy Theme Park is considered under both Options 1 and 2. This is relevant due to the way in which landscape character areas are subsequently considered within the Landscape Assessment; however, in the context of this review (which focusses on Options 1 and 3) it is less relevant.

Image EDP 2: Extract from the CBRE Report, showing the areas of search for each of the Options 1-3. Note areas of overlap to the NE of Crealy Theme Park.

2. Summary Review of Evidence Base Documents

2.1 The Evidence Base for the 'New Community'[1] is contained within a small number of key documents, as follows:

- The New Community Options Appraisal Strategic Planning Committee Report; and

[1] Evidence Base and Supporting Documents - New Community - East Devon

- The technical evidence report on new community site options (CBRE, Final Report October 2022), and the appendices to this:
    - Appendix A – Landscape Assessment;
    - Appendix B – Sustainability Report;
    - Appendix C – Ecological Report;
    - Appendix D – Highways Impact Modelling Report;
    - Appendix E – Utilities Due Diligence Report; and
    - Appendix F – Zero Carbon Assessment.

2.2 For each of the technical disciplines appraised, the Options were scored on a scale of 1-5, with a higher score reflecting a lower potential adverse impact/higher benefit. Based upon the overall scores, the report suggests that Option 2 be discounted from further consideration, and only Options 1 and 3 progress to further consultation.

2.3 In respect of landscape matters, these two options score subtly differently, with Option 3 being slightly favoured, scoring '3' (Medium Sensitivity) as opposed to '2' (Medium/High Sensitivity). With the scoring being on a scale of 1-5, from 'Low' to 'High' sensitivity the actual difference is evidently minimal between the two options.

2.4 On this basis, and with landscape and visual matters being inherently subjective in nature, it is worth reviewing the specific evidence base for landscape to understand where the contended difference lies, and how this relates to potential future development of the options. This review is undertaken below.

3. Review of Landscape Evidence Base

3.1 As set out above, the key evidence base documents are 'Appendix A – Landscape Assessment' of the CBRE Report (the 'LA'), and the CBRE Report itself, which effectively summarises Appendix A but adds some further commentary. Having reviewed these documents in full – and with prior knowledge of the Option A site and its context – a number of overarching comments can be highlighted in respect of the assessment made:

1. The LA considers the entire area containing the call for sites submissions but doesn't undertake the appraisal based upon the specific Options (1-3) from the outset, but does consider them after the initial review of sensitivity. This is considered a fair and appropriate approach;

2. The LA splits the study area into nine separate Local Landscape Units (LLUs), which again is considered appropriate to ensure areas of common character are appraised, without leading to a study which is unnecessarily detailed for this stage of the emerging plan process;

3. The methodology for appraising the LLUs (under three different development typologies) is clearly set out, has been agreed with the LPA, and conforms with the correct and relevant guidance (including GLVIA3 and LI TN 02/21). The fact the document has been authored by a collective of landscape practitioners also offers comfort that the approach taken is robust;

4. The policy context is accurately set out, and the constraints evaluation appears to include all relevant environmental considerations;

5. The LA initially states that it will include three key stages; a sensitivity assessment, followed by a capacity assessment, and then it proposes to undertake a concept planning stage based upon the findings of the previous two stages. Whilst the sensitivity assessment is published in full, the capacity assessment is not (as set out at paragraph 5.19 of the CBRE Options Appraisal document). A summary of the capacity assessment is provided at paragraphs 5.19 to 5.25. It doesn't appear that the concept planning stage has yet been undertaken;

6. The summary of the capacity assessment confirms that only the lower sensitivity areas of Options 1-3 were considered, which includes parts of the Option 1 site. There are no plans setting out the higher capacity areas noted, which would be helpful, but the following wording is provided:

5.16	Of the three Options identified, overall Option 3 is slightly less sensitive than Options 1 and 2 in landscape terms. However, within the area covered by Option 3 landscape sensitivity varies, and within Option 3 there are some areas of higher sensitivity where development would be likely to cause significant landscape and visual impact.
5.17	The land with the lowest levels of sensitivity is found in the southern part of Option 1 (overlapped by the western part of Option 2) and the northern part of Option 3. FFA proposed that these areas could potentially be combined to form a new 'Western Option'. This was considered by the CBRE led consultant team alongside EDDC but it was recognised that landscape was just one of the technical criteria being assessed as part of the Options Appraisal and that this alone should not drive the need to consider an additional Option.
5.18	As mentioned earlier in this report an iterative process was followed in identifying the location of land for the three site Options based upon a basket of factors including the outcome of technical assessments, mitigation of constraints and deliverability including land ownerships. Further, any additional Option would have required all the technical assessments to be updated to cover the proposed additional land take which would lead to programme delay. It was therefore decided to retain the three Options and not consider additional areas or Options.

7. In terms of the comparison between Option 1 and Option 3, both share the central area of Medium-Low sensitivity (for residential), and it is the LLUs to the extreme north and south (A and G respectively) where the differential lies – see Map 9 of the LA, repeated below as **Image EDP 3**. LLU A (covering a large part of Option 1) has a High-Medium sensitivity with LLU G (covering a large part of Option 3) having a Medium sensitivity;

8. Ultimately the difference between the two options (Options 1 and 3) appears marginal, and results from the above difference between LLUs A and G. Based upon a review of the baseline information presented in the LA, these two LLUs are broadly similar in terms of topography, designated sites, priority habitats and historic landscape character, so it must be assumed that localised experiential differences lead to the marginal higher sensitivity for LLU A. It is also true that Option 1 sits further away from the Area of Outstanding Natural Beauty (AONB), which lies to the south-east, and is perhaps not given sufficient prominence in the appraisal in this respect. An overlay of the LLUs and the option areas is provided as **Image EDP 3**; and

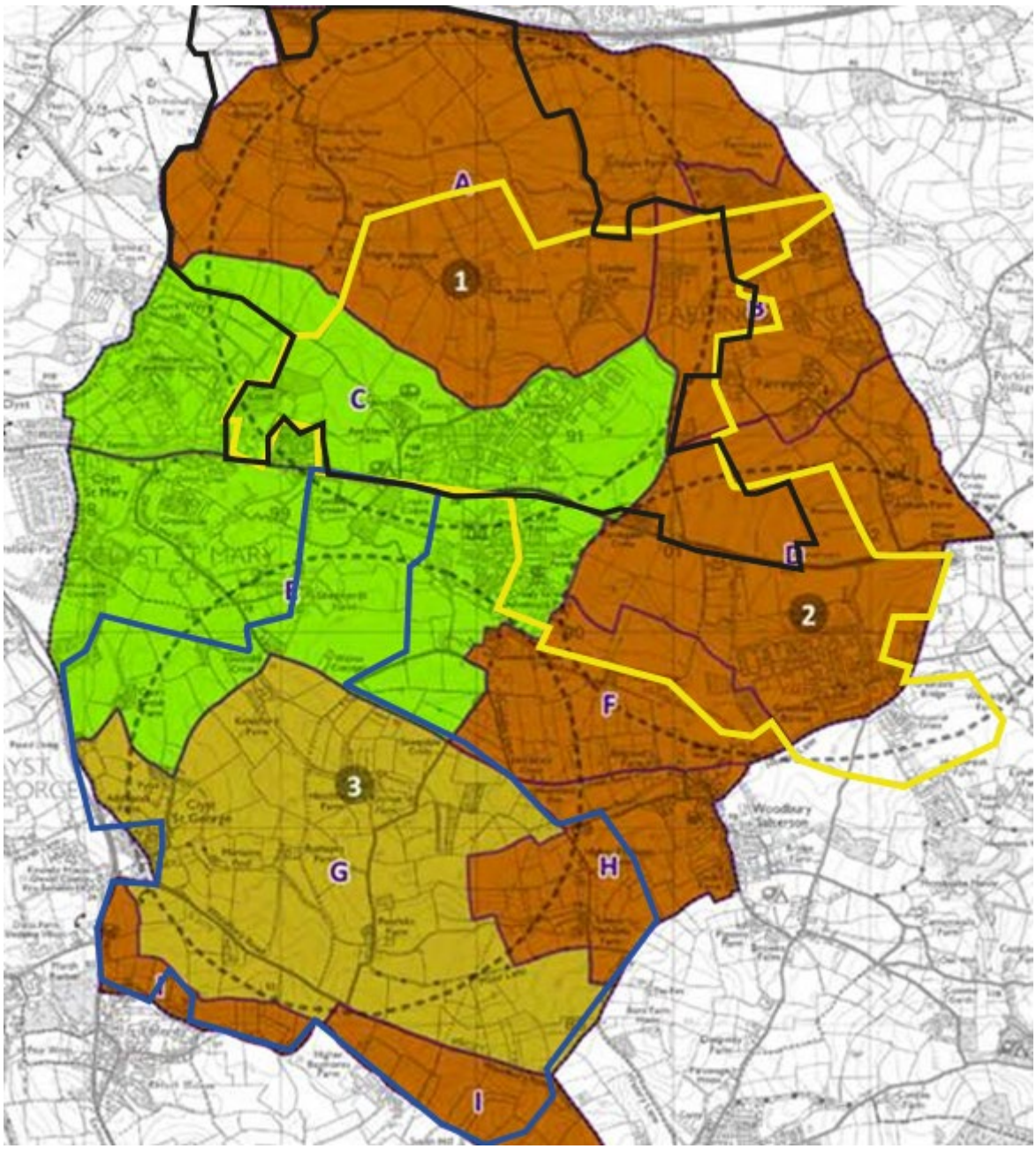

Image EDP 3: Extract of Appendix A Map 9 – Landscape sensitivity for housing, overlaid with revised Option areas – black = Option 1, yellow = Option 2 and blue = Option 3.

9. In terms of how these scores translate into the CBRE report, Option 3 has an overall evaluation of '3', with Options 1 and 2 having an overall evaluation of '2'. Whilst this difference is considered to be marginal (and probably within the realms of subjective judgement) on the basis of the review herein, it is considered entirely feasible that Options 1, 2 and 3 could all potentially have an overall scoring of 2 or 3.

3.2 Ultimately, the evidence as reviewed appears to be well authored and follows the correct guidance and process. However, as noted above landscape and visual assessment is a

subjective matter, and based upon this review, there are some concluding points which are felt should be made and considered as part of the next stage of the emerging Local Plan Process. These are detailed below.

4. Overall Summary

4.1 The key and most pertinent points from the wider review of the evidence base for the New Community, but as focussed on the landscape and visual aspects, are provided below:

- It is considered that the appraisal of the different options represents a robust and proportionate response for this stage of the process, and the overall findings of the landscape evidence are well-structured and clear;

- That said, there appears a lack of discernible distinction between the two most relevant assessed areas underlying Options 1 and 3, these being Local Landscape Units A and G. Based upon our review, and also the evidence provided in Appendix A (notably Maps 3 to 7 and the supporting text) any difference in character terms appears marginal, in addition to LLU A (and thus Option 1) being further from the AONB; and

- As a result – alongside considering the similarity in sensitivity for LLUs C and E (both Low/Medium sensitivity) – there does not appear compelling or strong evidence within the appraisal to score Option 1 as Medium/High sensitivity and Option 3 as Medium sensitivity. Given the subjective nature of landscape assessment, this is not a criticism, but an honest observation in relation to what is clearly a borderline conclusion of overall landscape sensitivity of what is (necessarily) still quite a large parcel of landscape.

Appendix 2: EAD Technical Note – Ecological review of New Settlement Options Appraisal Report (January 2023)

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Technical Note

Title:	Ecological review of New Settlement Options Appraisal Report
Date:	10.1.2023
Client:	Bloor Homes & Stuart Partners
Reference:	230110_P835_Ecological Review_EAD Ecology: January 2023
Prepared:	Matt Jones BSc MSc CEnv MCIEEM

1 Introduction

1.1 EAD Ecology has been commissioned by Bloor Homes and Stuart Partners to undertake an ecological review of the report entitled 'East Devon – Options Appraisal for a potential New Settlement' (CBRE, 2022; hereafter referenced as the 'Options Appraisal Report'). An Ecological Desk Study (TEP, 2022; hereafter referenced as the 'Ecological Report') is appended to the Options Appraisal Report (Appendix C); this document has also been included in the ecological review. Bloor Homes and Stuart Partners share significant land control within the area identified as Option 1 within the Options Appraisal Report.

2 Ecological appraisal of Options

§ *Overview*

2.1 The previous ecological appraisal of Options is summarised in Table 6.3 within the Options Appraisal Report; this is replicated below in Table 1.1. Each of the assessment categories have been appraised as part of the ecological review set out in this Technical Note. To ensure consistency and allow comparative assessment, none of the assessment categories have been modified as part of the ecological review.

Table 1.1. Options Appraisal Ecological Impact Summary Scores (CBRE, 2022)

Assessment category	Option 1	Option 2	Option 3
Statutory wildlife sites of international and national significance	5	4	3
Strategy 47 applies (Recreational pressure)	3	3	2
SSSI Impact Risk Zones	5	4	3
Statutory Wildlife Sites of regional/local significance	5	5	5
Local Wildlife Sites	3	3	5
Potential impact on Wildlife Sites Network	2	3	3
National or Devon Priority Habitats	2	3	2
Overall risk to ecological network	3	4	2
Diversity of protected/notable species	3	3	2
Total	31	32	27
Average	3.4	3.6	3.0

Statutory wildlife sites of international and national significance

2.2 The Options Appraisal Report identifies the locations of each Option in relation to the relevant network of international and national statutory-designated sites. Option 3 is located immediately adjacent to the 400m buffer zone (within which no residential development is permissible) around the Exe Estuary Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and Ramsar, as set out in Strategy 47 of the Adopted East Devon Local Plan 2013-2031 (hereafter referenced as 'Strategy 47') and based on evidence presented in the South-east Devon European Site Mitigation Strategy (Footprint Ecology, 2014). Whilst it is agreed that all Options have the

potential to deliver the required avoidance and mitigation measures for impacts to these statutory designated sites, it is considered that the location of Option 3 warrants an elevated impact-assessment score than currently assigned i.e., a score of 2 (Medium/High impact) as opposed to the score of 3 (Medium impact) in the Options Appraisal Report. It is considered that current scores for Options 1 and 2 are correct.

§ *Strategy 47 Applies (Recreational pressure)*

2.3 Option 1 and Option 2 are located at very similar distances from statutory-designated sites and have been assigned the same impact score of 3 (Medium impact) in the Options Appraisal Report. However, Option 1 is located over 10km from Dawlish Warren Special Area of Conservation (SAC) and SSSI, whilst Option 2 is within 10km (9.4km). Whilst the 10km recreation impact-zone around the SAC and SSSI is currently limited to within the Teignbridge District, it is considered that differentiation between the two Options could be made on a precautionary basis i.e. reducing the impact score for Option 1 to 4 (Low/Medium). The impact score of 2 (Medium/High impact) for Option 3 is considered appropriate and supports the rationale for increasing the overall impact score for statutory-designated sites of international and national significance for this Option, as set out in Paragraph 2.2 above.

§ *SSSI Impact Risk Zones*

2.4 It is considered that the differentiation set out in the Options Appraisal Report between the impacts of the three Options on SSSI Impact-Risk Zones is correct. However, in line with the review of impacts on statutory-designated sites of international and national significance, as set out in Paragraph 2.2 above, it is considered that the impact score for Option 3 should be increased from 3 (Medium impact) to 2 (Medium to High impact).

§ *Statutory wildlife sites of regional/local importance*

2.5 All Options are currently assigned the same impact score of 5 (Low impact) in the Options Appraisal Report. However, both Options 2 and 3 lie within 10km of Dawlish Warren, which, as identified in the Ecology Report, is a National Nature Reserve (NNR), as well as a SAC and SSSI. As set out above for consideration under Strategy 47 (refer to paragraph 2.3), whilst the 10km recreation-impact zone around Dawlish Warren is currently limited to the Teignbridge District, differentiation between the three sites could be made. In addition, Option 2 is closer than both Options 1 and 3 to the Pebblebed Heaths NNR (1.6km compared to 2.8km and 2.3km respectively). Consideration could, therefore, also be given to increasing further the impact score for Option 2, albeit all three Options occur within the recreation-impact catchment zone for this NNR, which is also a SAC and SPA. Overall, it is recommended that impact scores for Options 2 and 3 should be elevated from 5 to 4 (Low/Medium) on a precautionary basis due to their distance to the Dawlish Warren NNR i.e., <10km.

§ *Local Wildlife Sites*

2.6 The Options Appraisal Report and the Ecology Report identify 'Unconfirmed Wildlife Sites' (UWS) as Non-statutory (Local) Wildlife Sites. However, the 'Devon Local Sites Manual - Policies and Procedures for the Identification and Designation of Wildlife Sites' (Devon Biodiversity Records Centre (DBRC), 2022) defines UWS as follows (emboldened text to highlight significant text for this review):

'UWS are sites identified as having possible interest but not fully surveyed to be able to assess if it meets any of the CWS criteria. Sites are often identified through surveys of nearby areas or through aerial photography interpretation. Some of these sites will be areas of significant wildlife interest and, likely to meet CWS standard; however, some will not but may still contain priority habitat or high species interest. In this way the term does not denote a type of designation or assign a particular value to an area of land, but flags it as being of potential interest and a priority for survey, where the opportunity arises'.

2.7 Accordingly, it is considered that UWS should not be included in the Non-statutory (Local) Wildlife Site appraisal on the basis that they are not designated sites. Furthermore, it is considered that the Clyst Valley Regional Park should also not be included in the Non-statutory (Local) Wildlife Site appraisal. It is proposed that the Park will develop to be a multi-functional, high-quality natural greenspace, which, as set out in Strategy 10 of the Adopted East Devon Local Plan 2013-2031, will:

a) Provide high quality natural green space that is complementary to development and will be a stimulus to encourage commercial and business development of the highest standard.

b) Ensure natural ecosystems function in the West End of our District and ensure residents, workers, school children and visitors of all abilities have easy access to high quality open spaces, with linked benefits to health, education and food production.

c) Take recreation pressure away from more environmentally sensitive locations thereby overcoming concerns arising from application of the Habitat Regulations that would otherwise prevent development coming forward. Provision of the park could help address need and requirements arising from development in other parts of East Devon, Exeter and potentially Teignbridge. We will encourage a park that 'reaches into' the open spaces of our neighbouring authority partners.

d) Provide new wildlife corridors that enhance the biodiversity of the West End.

e) Provide green corridors, open space and biodiversity enhancement areas. Enhance cycling and walking opportunities to link habitats and sustainable movement networks that promote the overall recreational experience for the West End.

f) Conserve and enhance heritage assets and their setting to reflect their intrinsic importance, maximise beneficial outcomes for park users and to encourage use of the park and to enrich the cultural identity of the area.

2.8 As such, it is not a specific designated site for wildlife. Furthermore, significant areas of the Park are still to be delivered. Accordingly, impact scores for Options 1 (identified as having three UWS and land allocated for the Clyst Valley Regional Park; no other designations) and Option 2 (identified as having three UWS; no other designations) should be assigned the same impact score as Option 3 (no designations), which is 5 (Low impact).

§ *Potential for impact on Wildlife Sites Network; National or Devon Priority Habitat; Overall risk to the Ecological Network*

2.9 There is significant overlap between the above three assessment-categories and all three Options are very similar in terms of overall within-Option impacts. All three Options are likely to contain Habitats of Principal Importance (as stated in the Options Appraisal Report, these need to be confirmed through survey) and ecological networks e.g., watercourses; hedgerows. As identified in the Options Appraisal Report, the east-west ecological corridor formed by the watercourse (and tributaries) within Option 1 is likely to be of greater importance than those within Options 2 and 3.

2.10 Considering wider ecological connectivity, the area of Network Enhancement Zone 1 is greatest in Option 3, as identified in the Options Appraisal Report and Ecology Report. The location of this Zone across the northern part of Option 3, along with closer proximity to habitats associated with the Clyst Valley (including statutory designated sites) to the west means that the overall potential of impacts to wider ecological networks is elevated for this Option, as identified within the Options Appraisal Report.

§ *Diversity of protected and notable species*

2.11 It is considered that potential impacts on protected and/or notable species are likely to be very similar between Options 1 and 2. However, as set out in the Ecology Report, the diversity of such species, notably bird species, is likely to be greater within Option 3. Therefore, potential impacts of Option 3 on protected and notable species are likely to be elevated in comparison to Options 1 and 2, as identified in the Options Appraisal Report.

3 Conclusion

3.1 The ecological review agrees with the findings of the Options Appraisal Report in that there are no over-riding ecological constraints to the development of Options 1-3. However, the ecological review has identified amendments to the impact scores associated with each Option. These are set out in Table 3.1 below. It is recommended the average of these revised scores is taken forward for inclusion in a revised Options Appraisal Scoring Summary.

3.2 Option 1 achieves the highest score (lowest ecological impact), followed by Option 2 and then Option 3 (highest ecological impact). As set out previously in the Options Appraisal Report, the ecological review re-confirms that Options 1 and 2 are similar in impact level; the principal difference and change identified in this ecological review being the location of Option 1 further than 10km from Dawlish Warren SAC, SSSI and NNR (a precautionary consideration as the 10km recreation-impact catchment only currently applies to the Teignbridge District). Scores for both Options increase under this ecological review compared with the Options Appraisal Report due to the removal of UWSs and the Clyst Valley Regional Park from consideration of impacts on Local Wildlife Sites. The ecological review reconfirms that Option 3 has the highest ecological impact. The score for this Option has decreased (impact increased) in the ecological review due to greater significance being placed on the location of the Option 400m from the Exe Estuary SPA, SSSI and Ramsar, as well as the ecological network of habitats associated with the Clyst Valley.

Table 3.1. Ecological review impact summary scores (previous Options Appraisal (CBRE, 2022) score in brackets)

Assessment category	Option 1	Option 2	Option 3
Statutory wildlife sites of international and national significance	5 (5)	4 (4)	2 (3)
Strategy 47 applies (Recreational pressure)	4 (3)	3 (3)	2 (2)
SSSI Impact Risk Zones	5 (5)	4 (4)	2 (3)
Statutory wildlife sites of regional/local significance	5 (5)	4 (5)	4 (5)
Local wildlife sites	5 (3)	5 (3)	5 (5)
Potential impact on Wildlife Sites Network	2 (2)	3 (3)	3 (3)
National or Devon Priority Habitats	3 (2)	3 (3)	3 (2)
Overall risk to ecological network	3 (3)	4 (4)	2 (2)
Diversity of protected/notable species	3 (3)	3 (3)	2 (2)
Total	35 (31)	33 (32)	25 (27)
Average	3.9 (3.4)	3.7 (3.6)	2.8 (3.0)

Appendix 3: Options Appraisal – Noise Review (Wardell Armstrong, Jan 2023)

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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
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MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

BLOOR HOMES SOUTH WEST AND STUART PARTNERS LTD

EAST DEVON OPTIONS APPRAISAL

NOISE REVIEW

JANUARY 2023

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BLOOR HOMES SOUTH WEST AND STUART PARTNERS LTD

EAST DEVON OPTIONS APPRAISAL

NOISE REVIEW

JANUARY 2023

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CONTENTS

1 INTRODUCTION

1.1.1 Wardell Armstrong LLP (WA) has been instructed by Bloor Homes South West and Stuart Partners Ltd, to prepare a report to consider the likely noise constraints affecting the proposed 'New Town' development site. The site is being considered for allocation as the "preferred option" (Option 1) part of the emerging East Devon District Council (EDDC) Draft Local Plan, 2022.

1.1.2 The site is located to the east of Exeter and comprises approximately 251ha of land. The proposed development includes the provision of around 8,000 new homes, associated primary and secondary schools, health and leisure facilities and new employment land.

1.1.3 Three Options for the location of this 'New Town' have been proposed within the East Devon District Council 'East Devon – Options Appraisal for a potential New Settlement' report. The report states, however:

'Impacting…Option 1…there is a mineral safeguarding zone at the Hill Barton industrial estate and a (sic) established strategic waste facilities at both Hill Barton Business Park and Greendale Barton. These factors will need to be assessed and mitigated during masterplanning'

1.1.4 In order to address this concern, a review of the facilities at Hill Barton Business Park and Greendale Barton has been undertaken to understand the potential impacts in relation to noise. A general review of the wider site surroundings in relation to potential noise impacts has also been undertaken.

1.1.5 The appraisal adheres to all relevant policies and procedures which are outlined in Appendix A.

2 BASELINE SITUATION

2.1.1 There are several noise sources in the vicinity of the development which may have an impact on the proposed development. The following sources of noise have been identified:

- Road traffic noise on the A30, and M5, which have a national speed limit, and the A3052 which has a 50mph speed limit
- Aircraft noise associated with Exeter Airport
- Industrial noise from activity at the Exeter Airport Business Park, Hill Barton Business Park and Greendale Business Park
- Activity at Devon County Show Ground, including from Westpoint Arena
- Agricultural buildings adjacent and across the development site
- Crealy Theme Park and Resort

3 POTENTIAL NOISE IMPACTS

3.1.1 Sensitive locations are those where the public may be exposed to noise generated by the construction or operation of the proposed development site. These will include both existing sensitive receptors, who would be exposed to an increase in noise because of on-site construction activities, and exposure to additional noise from the proposed development itself (i.e. the proposed local centre and primary school), as well as proposed sensitive receptors, who would be introduced to existing sources of noise, as well as noise associated with the proposed development. Examples of locations that are sensitive to noise generated by construction activities include residential dwellings, hospitals, schools, care homes and commercially sensitive horticultural land.

3.2 Construction

3.2.1 Construction phase activities have the potential to cause an adverse impact at existing and proposed sensitive receptors. However, any noise or vibration impact would be of short duration and is unlikely to be significant following the implementation of good working practices and mitigation measures.

3.3 Operation

Existing Sensitive Receptors

3.3.1 Industrial and commercial noise sources are proposed as part of the proposed development. The introduction of new noise sources has the potential of generating adverse or significant adverse noise impacts at the existing and proposed noise sensitive receptors. Therefore, an assessment of the proposed noise sources, in relation to the existing acoustic environment at receptors, will be required. The masterplanning process could ensure these sources are positioned away from existing and proposed sensitive receptors, and during detailed design, any external plant could be designed to ensure noise generation is minimal, if required mitigation measures can also be designed into the development.

3.3.2 The proposed development will generate additional traffic and could cause a redistribution of existing traffic on the local road network. Therefore, there is the potential for noise from development led road traffic to cause an adverse impact at the existing sensitive receptors.

Proposed Sensitive Receptors

3.3.3 From a noise perspective, it is not considered that there are any significant constraints on the masterplanning for the site, as careful design and incorporation of mitigation measures (where required) could ensure noise impact to proposed receptors is minimised.

Road traffic noise

3.3.4 Road traffic noise has the potential to cause a significant adverse impact at the periphery of the proposed development. Mitigation measures may therefore be required for proposed receptors located closest to the nearby roads to ensure internal and external noise guideline levels are met. This could be achieved through the masterplanning process, ensuring stand-offs and orientation of dwellings are considered, as well as noise barriers where required.

3.3.5 Further into the site, noise attenuation will be provided by the proposed development buildings themselves. Therefore, road traffic noise at proposed dwellings located further into the site, and away from the road network, is likely to be partially screened and mitigation measures are unlikely.

Exeter Airport

3.3.6 Noise generated by aircraft flyovers at Exeter Airport has the potential to generate significant noise impacts and site constraints. As noise from aircraft flyovers will not have the benefit of screening provided by intervening dwellings, where required, noise mitigation will need to be provided through robust building envelope design.

3.3.7 A noise assessment was prepared by ACT Acoustics in 2017 (report ref 170613–225), examining the noise impact from aircraft flights and ground activities from Exeter Airport, and road traffic noise on the A30, on land immediately south of the A30. This land encompasses part of the proposed development land.

3.3.8 The assessment considered collectively the identified noise sources and produced a contour figure showing areas where development would likely be acceptable (see Figure 1).

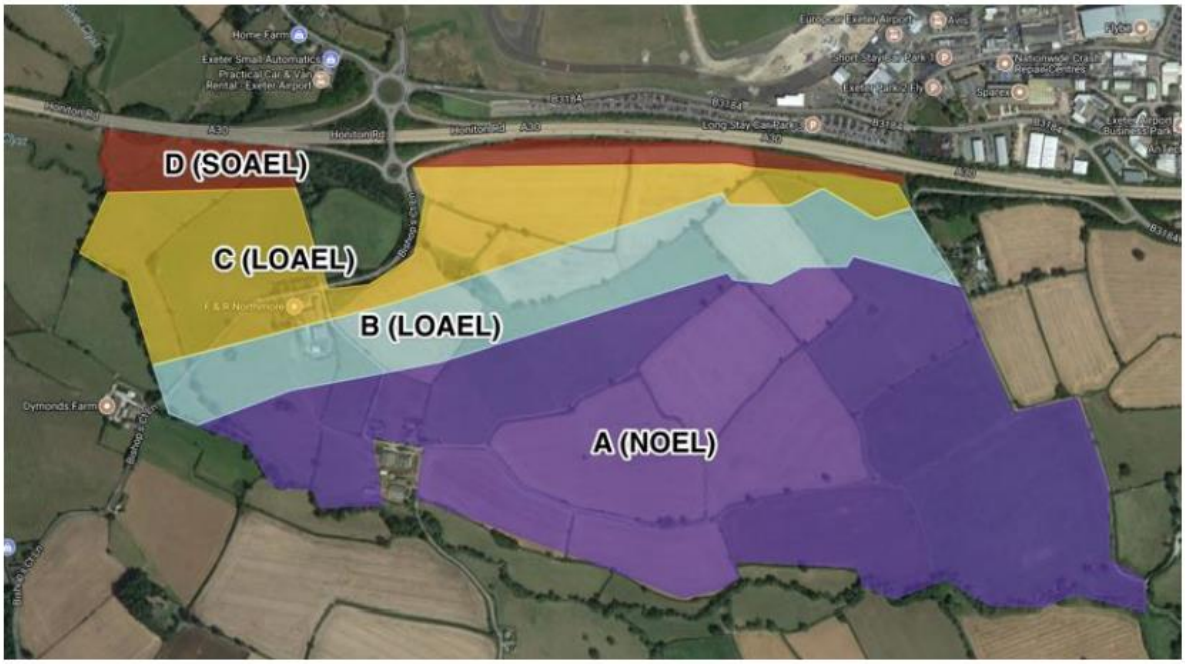

Figure 1: Areas for potential residential development (source ACT Acoustics Noise Assessment (ref 170613–225)

3.3.9 The contour banding on Figure 1 is represented as follows:

- Noise Band A (NOEL) There is no reason to refuse planning permission on noise grounds
- Noise Band B (LOAEL) The type of development will need to be considered Planning permission should indicate a requirement for some noise mitigation
- Noise Band C (LOAEL) The council may choose to oppose development due to adverse impacts. Planning permission should indicate a requirement for some noise mitigation
- Noise Band D (SOAEL) The council would normally oppose any development of a noise sensitive nature as external noise levels are above those recommended for desirable living conditions, significant noise mitigation is likely to be required

3.3.10 As Figure 1 shows, the majority of land south of the A30 and Exeter Airport is developable. The masterplanning process could ensure a stand-off from the A30 and Exeter Airport is incorporated to minimise residential development within Noise Bands C and D. Development within Noise Band B could be designed to ensure a robust building envelope design.

Devon County Show Ground

3.3.11 Noise from Devon County Show Ground has the potential to generate noise impacts and site constraints. Noise is likely to be constrained mainly to the daytime, however there is potential for night time events, as well as events being held in the external grounds. If required, the masterplanning process could ensure a stand-off from the show ground is incorporated, or the provision of a noise barrier to provide screening.

Crealy Theme Park and Resort

3.3.12 Noise from Crealy Theme Park and Resort has the potential to generate noise impacts and site constraints, however due to the distance from the proposed development, and the intervening A3052 likely being the dominant noise source, the impact is likely to be insignificant. Noise is also likely to be constrained to the daytime. The masterplanning process could ensure a stand-off from the theme park is incorporated, if required.

Agricultural Noise

3.3.13 Noise from agricultural buildings and processing has the potential to generate noise impacts and site constraints. Due to the semi rural nature of the area, noise from agricultural processes is more likely to be tolerated due to the setting. However, if required, the masterplanning process could ensure stand-offs from agricultural premises are incorporated, as well as noise barriers if required.

Industrial Noise

3.3.14 As highlighted by EDDC, there are concerns around the proximity of the proposed development to Hill Barton Business Park and Greendale Business Park. An in depth review of both these business parks has been undertaken.

Hill Barton Business Park

3.3.15 The business park is occupied by many commercial/industrial premises, which are focussed on the waste industry.

3.3.16 Table 2 below identifies the premises which have the potential to cause noise impacts and the controls that they have in place. Of note, the controls identified have been found through a search of the Environments Agency's (EA) Public Register and EDDC Planning Portal. It is possible that there may be further controls in place or other businesses with the potential to cause noise impacts, however this information was not publicly available.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
RWD Kwikform (South West)	• Supplier of construction equipment and materials • Equipment/materials are stockpiled on site • Seems to comprise of solid materials e.g., metal/wooden beams, struts	Potential for noise from machinery during loading, unloading and handling of materials. No permits relating directly to this business could be found, however, it is likely noise would be constrained to the daytime only.
EMS Waste Services	• Waste Transfer Station • Take construction / demolition waste, household waste, asbestos and bonded waste, WEEE waste and farm plastic • Waste is sorted, recycled or disposed • Type of recycling offered are: cardboard, glass, plastic, wood, metal, garden and green waste, inert waste	Potential for noise from machinery, during handling, stockpiling and processing/disposal of waste. The business is operated under two EA issued permits: • S0805 No 5-75kte Household, Commercial and Industrial Waste Transfer Station and asbestos (permit number BP3898VD) – the permit states: *Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable, to minimise, the noise and vibration* • A9: Special Waste Transfer Station (permit number GM3403MT)
Brooker Energy Exeter	• Combined Heat and Power plant	Potential for noise from operation of CHP plant. A noise assessment for the CHP was prepared in October 2022

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
	• Receive waste (refuse derived fuel) from local Materials Recovery Facilities (MRFs) • Also produce dry wood chip for biomass boilers	(planning ref. 22/2780/CM) which found noise from the CHP was below background noise levels during both the daytime and night-time periods, concluding a negligible impact in accordance with BS 4142.

Hil Barton Landfill	• Landfill for inert waste
	• Authorised Waste:
	  ○ Devon Cat.A: Inert Waste
	  ○ Devon Cat.B: General Waste
	  ○ Max.Waste Permitted by Licence
	• Prohibited Waste:
	  ○ Dust/Ash/Powder/Particulate
	  ○ Liquid Wastes
	  ○ Mat'L Contam. Above ICRCL Action Level
	  ○ Sludge Wastes
	  ○ Waste N.O.S.
	• Wash plant on site – mix inert waste and turn into reusable products (if possible)
	• Also crush hardcore material for resale
		Potential for noise from plant and machinery used for handling of waste. The business is operated under two EA issued permits:
		• LO5: Inert Landfill (permit number DB3500TT)
		• A16: Physical Treatment Facility (permit number CB3100UB)
		The landfill also has a Local Authority issued PG3/16 Mobile screening and crushing processes permit (permit number EP/00053).
		A noise assessment for the wash plant was prepared in July 2021 (planning ref. 21/2709/CM) which found the noise from the wash plant on existing background noise levels to be of low impact.

Hill Barton Incinerator	• Process commercial and industrial waste in the form of RDF through gasification • Process and store incinerator bottom ash (IBA) • Steam is generated to power a turbine for electricity generation.	Potential for noise from plant and machinery associated with operation of the incinerator and processing/handling of IBA. The site has been designed in accordance with Best Available Techniques (BAT) and the noise assessment undertaken in 2020 predicted rating levels equal to or below background noise levels. No permits could be found publicly however it is assumed one would be in place.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
Hill Barton Compositing Facility	• Creation of compost from recycled material • Shredder breaks down material and then screened to correct size • The compost is then allowed to mature in stockpiles	Potential for noise from machinery associated with loading, unloading and handling of compost. The business is operated under EA permit A22: Composting Facility (permit number EX3601XA)

UK Remediation Ltd	• Soil treatment facility - Accept wide variety of hazardous and non-hazardous soils including heavy metals and hydrocarbon contaminated materials such as:
	  ○ Soils and aggregates
	  ○ Construction wastes
	  ○ Dredging spoils
	  ○ Drilling muds
	  ○ Sludges & street-cleaning residues
	• Sustainable and landfill tax-free
		Potential for noise from material handling and processing. The business is operated under EA permit A23: Biological Treatment Facility (permit number LP3939TS) - the permit states: *Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable, to minimise, the noise and vibration*

Tarmac Exeter Asphalt Plant	• Plant producing asphalt – a process in which aggregates, binder and filler are mixed together	Potential for noise from plant and machinery associated with loading, unloading, material handling and processing. The business is operated under a Local Authority issued PG3/15 Mineral drying and roadstone coating processes permit (permit number EP/00082). As Tarmac is a nationwide company, it is assumed all necessary permits/management plans would be in place.
AE Stuart and Sons	• Agricultural and Farm Contractors • Drying plant for grain processing	Potential for noise from plant and machinery however no permits

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
		relating directly to this business could be found. It was found AE Stuart and Sons also run the Hill Barton Landfill which is operated under several permits and therefore it is assumed the business is also ran in a similar way.
Kloechner Metals UK	• Metal processing and manufacturing	Potential for noise from machinery and plant associated with processing and handling of materials, however no permits relating directly to this business could be found. From aerial imagery it appears there are no external works and outside areas are used for stockpiling only. Stockpiling would likely be constrained to the daytime only.
BT Jenkins Ltd	• Earthmoving and plant hire business • Crushing and screening of minerals	Potential for noise from machinery and plant associated with material handling, crushing and screening. The business is operated under a Local Authority issued PG3/16 Mobile screening and crushing processes permit (permit number EP/00047)
Sunbelt Rentals Plant & Tools	• Supplier of construction plant and tools for the industry	Potential for noise from handling of equipment in the external storage yard however no permits relating directly to this business could be found. External activities are likely to be constrained to the daytime only.
CCF Exeter	• Building materials supplier	Potential for noise from handling of equipment in the external storage yard however no permits relating directly to this business could be found. External activities are likely to be constrained to the daytime only.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
Puncturesafe / Mercedes Benz of Exeter	• Vehicle repair shop	Potential for noise from works in external yard however no permits relating directly to this business could be found. External activities are likely to be constrained to the daytime only.
Several distribution companies	• Distribution companies identified are: ○ Backline Logistics ○ Millbrook Healthcare ○ Red Hot Products ○ Dalziel Ltd. t/a MK Ingredient Supplies ○ John Lewis Customer Delivery Hub ○ Gardner Distribution ○ New World Timber	Potential for noise from loading and unloading activities from HGVs. Likely to be both daytime and night-time, however it is assumed noise from internal activity would be minimal.

3.3.17 A review of the business park shows that all other site occupiers do not appear to operate businesses which have the potential to cause noise impacts. There will be noise from traffic on internal roads, however this noise would be minimal in comparison to noise from business operations.

3.3.18 As stated by EEDC, there is a concern that the presence of the development would impact the mineral safeguarding zone. As identified above, the majority of businesses at Hill Barton Business Park are controlled by permits or management plans that are in place, to ensure there is no impact to workers or nearby residential receptors. Although there are existing residential receptors close to the business park, the masterplanning process could ensure that stand-offs to Hill Barton Business Park are incorporated, to reduce any impact to both proposed receptors and occupiers of Hill Barton Business Park. This would ensure that the introduction of receptors would not place any unreasonable restriction have a negative effect on their continued working.

Greendale Business Park

3.3.19 The business park is occupied by a large number of commercial/industrial premises, which are focussed on the delivery industry.

3.3.20 Table 3 below identifies the premises which have the potential to cause noise impacts and the controls that they have in place. Of note, the controls identified have been found through a search of the Environments Agency's (EA) Public Register and EDDC Planning Portal. It is possible that there may be further controls in place or other businesses with the potential to cause noise impacts, however this information was not publicly available.

Table 3: Identified Premises at Greendale Business Park with the potential to cause impact

Premises	Description of Business	Potential Noise Impact/Controls in Place
NU-Heat LTD	• Underfloor heating company	Potential for noise from handling of materials in the external storage yard however no permits relating directly to this business could be found. External activities are likely to be constrained to the daytime only
Jet Set	• Sand and gravel supplier • Ready-Mix Concrete supplier	Potential for noise from plant and machinery associated within material handling/processing, unloading and loading activities, however no permits relating directly to this business could be found. It is assumed a Local Authority issued permit would be in place (assumed title PG3/15 Mineral drying and roadstone coating processes)
Westexe Direct	• Material handling equipment supplier • Forklift dealer	Potential for noise from handling of materials in the external storage yard however no permits relating directly to this business could be found. External activities are likely to be constrained to the daytime only
MGF	• Supplier of excavation support systems • Equipment/materials are stockpiled on site • Seems to comprise of solid materials e.g., metal sheets, pre cast concrete	Potential for noise from machinery during loading, unloading and handling of materials. No permits relating directly to this business could be found however it is likely noise would be constrained to the daytime only

Table 3: Identified Premises at Greendale Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
D&M Plant & Commercials	• Fabication, plant servicing, maintenance and repairs of vehicles and machinery	Potential for noise from plant and machinery, however no permits relating directly to this business could be found. Works are likely to be constrained to the daytime only
Viridor Waste Management Ltd	• Waste management service	Potential for noise from plant and machinery, however no permits relating directly to this business could be found. As Viridor is a large nationwide company, it is assumed all necessary permits/management plans would be in place
Natural Horse Bedding	• Timber merchant	Potential for noise if wood is cut on site however no permits relating directly to this business could be found. From aerial imagery it appears there are no external works, therefore noise should be minimal, relating to mainly loading and unloading activities
HSL Scaffolding	• Provider of scaffolding	Potential for noise from handling of scaffolding however no permits relating directly to this business could be found. Works are likely to be constrained to the daytime only
SUEZ recycling and recovery UK	• Waste management service	Potential for noise however no permits relating directly to this business could be found. As SUEZ is a large nationwide company, it is assumed all necessary permits/management plans would be in place
Several distribution companies	• Distribution companies identified are: ○ AO Depot ○ Royal Mail ○ DHL Parcel UK Depot ○ Weddel Swift Distribution Ltd	Potential for noise from loading and unloading activities from HGVs. Likely to be both daytime and night-time, however it is assumed noise from internal activity would be minimal

Table 3: Identified Premises at Greendale Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Noise Impact/Controls in Place**
	○ FedEx Station	

3.3.21 A review of the business park shows that all other site occupiers do not appear to operate businesses which have the potential to cause noise impacts. There will be noise from traffic on internal roads, however this noise would be minimal in comparison to noise from business operations.

3.3.22 The processes at Greendale Business Park should be controlled by permits or management plans, to ensure there is no impact to workers or nearby residential receptors. Although there are existing residential receptors close to the business park, the masterplanning process could ensure that stand-offs to Greendale Business Park are incorporated, to reduce any impact to both proposed receptors and occupiers of Greendale Business Park. This would ensure that the introduction of receptors would not have a negative effect on their continued working.

4 OPPORTUNITIES TO MINIMISE IMPACTS

4.1 Good Acoustic Design

4.1.1 Before façade mitigation is considered, it is recommended that the developers seek to achieve good acoustic design by following the noise management measures in the following order of preference. This would form crucial consideration during the masterplanning process.

Spatial Separation

4.1.2 Where possible in the site design, dwellings should benefit from a standoff distance from the road, such that any further additional mitigation is not required.

4.1.3 Therefore, incorporating a standoff between the dwelling and noise sources should be considered during the layout design. Access roads could be use as part of any proposed standoffs.

Reducing and Relocating Existing Noise

4.1.4 The possibility of reducing or relocating the noise sources impacting the development should be considered, although this is not always feasibly possible.

Use of existing topography and structures

4.1.5 The topography of the site could be a useful noise screen. Intervening buildings that form part of the proposed development will be a useful source of noise screening.

Noise Barriers

4.1.6 Barriers in the form of an acoustic fence or bund could be used at the source of noise. Garden boundary fencing would also form part of this.

Site Layout and Plot Orientation

4.1.7 It is usually recommended as best practise to orientate dwellings so that gardens are proposed on the screened side of dwellings where possible, which would mean that the building itself provides some mitigation noise. Dwellings towards the centre of the site would be protected by the development itself.

Façade Mitigation

4.1.8 Where the above measures have been considered in the design and plots will require to be close to noise sources, façade mitigation can be applied.

4.1.9 The level and type of mitigation required is detailed would be dependent upon the internal room design and results of a noise assessment.

4.1.10 The detailed acoustic design of the development and the appropriate mitigation strategy can be confirmed at the design stage.

4.2 Construction

4.2.1 During construction, any potential noise and vibration impacts could be controlled as part of a Construction Environmental Management Plan (CEMP).

4.3 Operation

Daytime Noise Levels in Outdoor Living Areas

4.3.1 To achieve the recommended BS8233 guideline noise levels in external living areas, it is likely that proposed dwellings nearest to the A30, A3052, and the industrial estates, will need to be orientated with gardens on the screened side of dwellings.

4.3.2 In addition, standoff between the dominant noise sources and dwellings may need to be incorporated into the design of the proposed development to minimise the noise impact in gardens. It is likely that the use of standard close boarded fencing between the dominant noise sources and the closest gardens will be required to provide screening to external living areas.

4.3.3 External living areas further into the site would be protected by development buildings themselves and are unlikely to require any specific mitigation measures.

4.3.4 Any mitigation requirements and options will be assessed in more detail and confirmed within the noise assessment which will be prepared to accompany the outline planning application, and will include baseline noise monitoring.

Daytime and Night-time Noise Levels in Living Rooms and Bedrooms

4.3.5 The façades of proposed living rooms and bedrooms closest to the A30, A3052 and the nearby industrial noise sources are likely to require an alternative means of ventilation to allow windows, to be closed (when required) to meet the guideline internal noise levels and reduce any impacts associated with the existing industrial noise sources. A suitable glazing, ventilation and overheating prevention scheme is likely to be required for receptors located close to existing sources of noise.

4.3.6 Alternatively, sensitive rooms could be located on the screened façades, away from the nearest noise sources, to achieve the recommended BS8233 guideline noise levels,

with windows open. However, this may not be possible for dwellings most affected by aircraft flyovers.

4.3.7 Due to aircraft flyovers, orientation of dwellings would not provide a sufficient level of noise attenuation. Therefore, a suitable glazing, ventilation and overheating prevention strategy, together with a robust roof design may be required to sufficiently mitigate internal noise levels from aircraft.

4.3.8 Proposed building façades located further into the site will be screened from off-site noise sources such as road traffic noise, and industrial noise sources by the development buildings themselves. However, dwellings throughout the site may be affected by aircraft flyovers, and therefore, mitigation measures may be required for all proposed dwellings.

4.3.9 Any mitigation requirements and options will be assessed in more detail and confirmed within the noise assessment which will be prepared to accompany the outline planning application, and will include baseline noise monitoring across the proposed development site.

Overheating Assessment

4.3.10 The risk of overheating within proposed dwellings will have to be considered in accordance with the AVO and Building Regulations Approved Document O – Overheating (AD-O). The proposed development site is in the south of the country and due to noise impacts, some proposed dwellings are likely to require closed windows during the daytime and night-time periods to achieve internal noise guideline levels. Therefore, the risk of overheating occurring at the development should be assessed.

4.3.11 An overheating risk assessment will be undertaken, as part of the noise assessment, to establish the likely risk of overheating. The requirements for noise mitigation will be considered to identify the level of risk of overheating across the development site.

4.3.12 Where there is potential for a significant overheating risk, we would look to reduce this risk via good acoustic design of the development (i.e. reducing the noise impact at sensitive façades). If a significant overheating risk is still present following the implementation of good acoustic design, a full overheating assessment and mitigation will need to be considered, this assessment and any subsequent mitigation strategy would be designed in consultation with a specialist Mechanical and Electrical engineer.

4.3.13 Currently we do not consider the vast majority of the development to be at risk of overheating. Any overheating issues are likely to be confined to the periphery of the development where noise levels are likely to be elevated, however, this will be confirmed as part of the noise assessment.

5 SUMMARY OF CONSTRAINTS

5.1.1 A summary of the potential noise constraints related to the proposed development is given below.

Construction Phase

5.1.2 Potential noise effects during construction include:

- Noise from construction activities at nearby sensitive receptors (including residential)
- Increase in road traffic noise by construction vehicles using the local road network

Operational Phase

5.1.3 Potential noise effects during operation include:

- Generation of additional traffic on the local road network resulting in potential elevated noise levels
- Introducing receptors in proximity to Hill Barton and Greendale Business Parks
- Existing sources of noise from road traffic, aircraft noise, industrial activity (including Hill Barton and Greendale Business Parks), Devon County Show Ground, agricultural buildings and Crealy Theme Park and Resort
- Overheating could also be an issue due to potential mitigation required in relation to noise.

5.1.4 Good acoustic design could be incorporated at an early stage through the masterplanning process, and detailed design at a later stage, to safeguard proposed receptors.

APPENDIX A

Noise Guidance and Legislation

Noise Assessment Criteria for Residential Development

Typically, local authorities require the potential impacts of existing noise sources on a proposed residential area of a development to be assessed with reference to the following guidance:

- National Planning Policy Framework, 2021 (NPPF)
- Planning Practice Guidance – Noise, 2019 (PPG)
- Noise Policy Statement for England 2010 (NPSE)
- Pro:PG Planning & Noise: Professional Practice Guidance on Planning and Noise, 2017 (ProPG)
- AVO Acoustics, Ventilation and Overheating – Residential Design Guide, 2020 (AVO)
- Building Regulations Approved Document O: Overheating, 2022 (AD-O)
- British Standard 8233: 2014 Guidance on sound insulation and noise reduction for buildings (BS 8233:2014)
- British Standard 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound (BS 4142)
- BS 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise (BS 5228-1), and Part 2: Vibration (BS 5228-2)

National Planning Policy Framework

In July 2021 the 'National Planning Policy Framework' (NPPF) was amended as the current planning policy guidance within England.

Paragraph 185 of the NPPF states:

'Planning policies and decisions should also ensure that new development is appropriate for its location taking in account the likely effects (including cumulative effects) of pollution on heath, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impact that could arise from the development. In doing so they should:

a. Mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development - and avoid noise giving rise to significant adverse impact on health and the quality of life;

b. Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason'…

Paragraph 187 of the NPPF states:

> 'Planning policies and decisions should ensure that new development can be integrated with existing business and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.'

Noise Policy Statement for England

With regard to 'significant adverse impacts on health and the quality of life' the NPPF refers to the 'Noise Policy Statement for England' (NPSE).

The Noise Policy Statement for England refers to the World Health Organisation when discussing noise impacts and introduces observed effect levels which are based on established concepts from toxicology that are applied to noise impacts by WHO.

Three levels are defined as follows:

> 'NOEL – No Observed Effect Level
>
> - This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.
>
> LOAEL – Lowest Observed Adverse Effect Level
>
> - This is the level above which adverse effects on health and quality of life can be detected.
>
> SOAEL – Significant Observed Adverse Effect Level
>
> - This is the level above which significant adverse effects on health and quality of life occur'.

The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided. The second aim refers to the situation where the impact lies somewhere between LOAEL and SOAEL, and it requires that all reasonable steps are taken to mitigate and

minimise the adverse effects of noise. However, this does not mean that such adverse effects cannot occur.

Planning Practice Guidance – Noise

The Planning Practice Guidance (PPG) provides further detail about how the effect levels can be recognised. Above the NOEL noise becomes noticeable, however it has no adverse effect as it does not cause any change in behaviour or attitude. Once noise crosses the LOAEL threshold it begins to have an adverse effect and consideration needs to be given to mitigating and minimising those effects, taking account of the economic and social benefits being derived from the activity causing the noise. Increasing noise exposure further might cause the SOAEL threshold to be crossed. If the exposure is above this level the planning process should be used to avoid the effect occurring by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused. At the highest extreme the situation should be prevented from occurring regardless of the benefits which might arise. Table 1 summarises the noise exposure hierarchy.

Table 1: National Planning Practice Guidance Noise Exposure Hierarchy			
Response	**Examples of Outcomes**	**Increasing Effect Level**	**Action**
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

The PPG summarises the approach to be taken when assessing noise. It accepts that noise can override other planning concerns, but states:

"Neither the Noise Policy Statement for England nor the National Planning Policy

> Framework (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separate from the economic, social and other environmental dimensions of proposed development"

ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise

ProPG Planning and Noise provides professional practice guidance in relation to new residential development exposed to noise from transport sources. It provides practitioners with a recommended approach to the management of noise within the planning system in England.

The guidance reflects the Government's overarching National Planning Policy Framework, the Noise Policy Statement for England, and Planning Practice Guidance (including PPG-Noise) and draws on other authoritative sources of guidance. It provides advice for Local Planning Authorities and developers, and their professional advisors, on achieving good acoustic design in and around new residential developments.

British Standard 8233:2014 Guidance on sound insulation and noise reduction for buildings

British Standard 8233 "Guidance on sound insulation and noise reduction for buildings" 2014, suggests the following guideline noise levels and states that they are based on guidelines issued by the World Health Organisation;

- 35 dB $L_{Aeq\ (16\ hour)}$ during the day time in noise sensitive rooms
- 30 dB $L_{Aeq\ (8\ hour)}$ during the night time in bedrooms
- 45 dB $L_{Amax,F}$ during the night time in bedrooms
- 50 dB $L_{Aeq\ (16\ hour)}$ desirable external noise levels for amenity space such as gardens and patios
- 55 dB $L_{Aeq\ (16\ hour)}$ upper guideline value which would be acceptable in noisier environments.

In addition, for internal noise levels it states;

> "Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved."

Furthermore, with regard to external noise, the Standard states;

> "However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas,

such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited".

British Standard 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound (BS 4142):

BS 4142 is used to rate and assess sound of an industrial and/or commercial nature including:

- sound from industrial and manufacturing processes;
- sound from fixed installations which comprise mechanical and electrical plant and equipment;
- sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and
- sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

The standard is applicable to the determination of the following levels at outdoor locations:

- rating levels for sources of sound of an industrial and/or commercial nature; and
- ambient, background and residual sound levels, for the purposes of:

1) Investigating complaints;

2) Assessing sound from proposed, new, modified or additional source(s) of sound of an industrial and/or commercial nature; and

3) Assessing sound at proposed new dwellings or premises used for residential purposes.

The purpose of the BS 4142 assessment procedure is to assess the significance of sound of an industrial and/or commercial nature.

BS 4142 refers to noise from the industrial source as the 'specific noise' and this is the term used in this report to refer to noise which is predicted to occur due to activities associated with industrial noise. The 'specific noise' sources, of the existing industrial premises that have

been observed are detailed in Section 3 of this report.

BS 4142 assesses the significance of impacts by comparing the specific noise level to the background noise level (L_{A90}). Section 3 of this report provides details of the background noise survey undertaken.

Certain acoustic features can increase the significance of impacts over that expected from a simple comparison between the specific noise level and the background noise level. In particular, BS 4142 identifies that the absolute level of sound, the character, and the residual sound and the sensitivity of receptor should all be taken into consideration. BS 4142 includes allowances for a rating penalty to be added if it is found that the specific noise source contains a tone, impulse and/or other characteristic, or is expected to be present. The specific noise level along with any applicable correction is referred to as the 'rating level'.

The greater the increase between the rating level over the background noise level, the greater the magnitude of the impact. The assessment criteria given by BS 4142 are as follows:

- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

During the daytime, BS 4142 requires that noise levels are assessed over 1-hour periods. However, during the night-time, noise levels are required to be assessed over 15-minute periods.

Where the initial estimate of the impact needs to be modified due to context, BS 4142 states that all pertinent factors should be taken into consideration, including:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound; and,

- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

British Standard 5228:2009 +A1:2014 "Code of Practice for noise and vibration control on construction and open Sites – Part 1: Noise" (BS 5228-1)

Guidance on the prediction and assessment of noise from development sites is given in British Standard 5228 -1:2009 +A1:2014 "Code of Practice for noise and vibration control on construction and open Sites – Part 1: Noise" (BS 5228-1), and BRE Controlling particles, vapour and noise pollution from construction Sites, Parts 1 to 5, 2003.

In addition to the guidance from the local authority, the Control of Pollution Act 1974 (COPA 1974) gives the local authority power to serve a notice under Section 60 imposing requirements as to the way in which works are to be carried out. This could specify times of operation, maximum levels of noise which may be emitted and the type of plant which should or should not be used.

However, it might be preferable for the chosen contractor to obtain prior consent under Section 61 of COPA 1974. Section 61, enables anyone who intends to carry out works to apply to the local authority for consent. Under Section 61 the local authorities and those responsible for construction work, have an opportunity to settle any problems, relating to the potential noise, before work starts.

In addition to COPA 1974, BS 5228-1 provides guidance on significance criteria for assessing the potential noise impacts associated with the construction phase of large projects. For the purposes of this noise assessment, the noise likely to be generated by the earthworks and construction phase, have been assessed against significance criteria established, using the BS5228-1 ABC Method.

The ABC method for determining significance criteria requires the ambient noise levels at existing sensitive receptors to be determined. The ambient noise levels at each existing receptor location are then rounded to the nearest 5dB(A) to determine the appropriate threshold value in accordance with the category value A, B or C, as detailed in the following table.

Table 2: Thresholds of Significant Impact from Construction Noise at Residential Receptors in accordance with the ABC Method of BS5228-1			
Assessment Category and Threshold Value Period (LAeq)	**Threshold Value, in decibels (dB)**		
	Category A *1	**Category B *2**	**Category C *3**
Daytime (0700 to 1900 hours) and Saturdays (0700 to 1300 hours)	**65**	**70**	**75**
***1 Category A: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than this value.**			
***2 Category B: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as Category A values.**			
***3 Category C: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than Category A values.**			

The noise level likely to be generated at the receptor during the construction phase, i.e. the ambient noise level plus construction noise, is then compared to the appropriate category value. If the noise level is greater than the appropriate category value, a significant noise impact may be registered.

British Standard 5228:2009 +A1:2014 "Code of Practice for noise and vibration control on construction and open Sites – Part 2: Vibration" (BS 5228-2)

Guidance on the assessment of vibration from development sites is given in British Standard 5228-2:2009 "Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration" (BS5228-2). BS 5228-2:2009 indicates that vibration can have disturbing effects on the surrounding neighbourhood; especially where particularly sensitive operations may be taking place. The significance of vibration levels which may be experienced adjacent to a site is dependent upon the nature of the source.

BS 5228-2 indicates that the threshold of perception is generally accepted to be between a peak particle velocity (PPV) of 0.14 and 0.3mm/sec. In an urban situation it is unlikely that such vibration levels would be noticed. BS 5228-2 also indicates that it is likely that vibration of 1.0 mm/s in residential environments will cause complaint but can be tolerated if prior warning and explanation have been given to residents. The standard also indicates that 10 mm/s is likely to be intolerable for any more than a very brief exposure to this level.

The Highways Agency Research report No. 53 "Ground Vibration caused by Civil Engineering Works" 1986 suggests that, when vibration levels from an unusual source exceed the human threshold of perception, complaints may occur. The onset of complaints due to continuous vibration is probable when the PPV exceeds 3mm/sec.

British Standard BS 6472: 2008 "Guide to Evaluation of human exposure to vibration in buildings. Part 1: Vibration sources other than blasting" (BS 6472-1) suggests that adverse

comments or complaints due to continuous vibration are rare in residential situations below a PPV of 0.8mm/sec. Continuous vibration is defined as “vibration which continues uninterrupted for either a daytime period of 16 hours or a night-time period of 8 hours”. The proposed earthworks and construction works at the site will not cause continuous vibration as defined in BS 6472-1.

BS 5228-2 2009 suggests that the onset of cosmetic damage is 15mm/sec (15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz for residential or light commercial type buildings).

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Appendix 4: Options Appraisal – Air Quality Review (Wardell Armstrong, Jan 2023)

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ENERGY AND CLIMATE CHANGE
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BLOOR HOMES SOUTH WEST AND STUART PARTNERS LTD

EAST DEVON OPTIONS APPRAISAL

AIR QUALITY REVIEW

JANUARY 2023

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BLOOR HOMES SOUTH WEST AND STUART PARTNERS LTD

EAST DEVON OPTIONS APPRAISAL

EAST DEVON OPTIONS APPRAISAL

JANUARY 2023

PREPARED BY:

Emily Forster	Senior Environmental Scientist	

APPROVED BY:

Mark Dawson	Service Lead – Acoustics and Air Quality	

CONTENTS

1 INTRODUCTION

1.1.1 Wardell Armstrong LLP (WA) has been instructed by Bloor Homes South West and Stuart Partners Ltd, to prepare a report to consider the likely air quality constraints affecting the proposed 'New Town' development site. The site is being considered for allocation as the "preferred option" (Option 1) part of the emerging East Devon District Council (EDDC) Draft Local Plan, 2022.

1.1.2 The site is located to the east of Exeter and comprises approximately 251ha of land. The proposed development includes the provision of around 8,000 new homes, associated primary and secondary schools, health and leisure facilities and new employment land.

1.1.3 Three Options for the location of this 'New Town' have been proposed within the East Devon District Council 'East Devon – Options Appraisal for a potential New Settlement' report. The report states, however:

'Impacting…Option 1…there is a mineral safeguarding zone at the Hill Barton industrial estate and a (sic) established strategic waste facilities at both Hill Barton Business Park and Greendale Barton. These factors will need to be assessed and mitigated during masterplanning'

1.1.4 In order to address this concern, a review of the facilities at Hill Barton Business Park and Greendale Barton has been undertaken to understand the potential impacts in relation to air quality. A general review of the wider site surroundings in relation to potential air quality impacts has also been undertaken.

2 BASELINE SITUATION

2.1 Air Quality Management

2.1.1 The proposed development site is located within the administrative area of EDDC which is responsible for the management of air quality.

2.1.2 EDDC has declared one Air Quality Management Area (AQMA) for exceedance of the nitrogen dioxide annual mean air quality objective. The East Devon AQMA is located 15km from the proposed development land. The nearest AQMA, which is not located in East Devon, is the Exeter AQMA, located 2.6km away. All other AQMAs in the surrounding area are further away and located in dense urban locations.

2.2 Background Concentrations at the site

2.2.1 There are no background air quality monitoring locations in the immediate vicinity of the proposed development site. In order to provide more information on background concentrations at the proposed development site, data has been obtained from the 2018-based default concentration maps provided by Defra on their Local Air Quality Management (LAQM) web pages (http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html). The background pollutant concentrations are detailed below in Table 1 (approximate grid reference for across the site).

Table 1: Background Air Pollutant Concentrations Obtained from the 2018-Based Defra Default Concentration Maps

Grid Reference	2023 Pollutant Concentrations (µg/m^3)		
	Nitrogen Dioxide (NO_2)	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)
300500, 090500	5.88	10.83	6.02
301500, 090500	5.37	11.46	6.13
298500, 091500	6.58	10.11	5.83
299500, 091500	5.92	9.83	5.67
300500, 091500	5.56	11.02	5.97
301500, 091500	5.20	10.71	5.89
298500, 092500	6.70	10.05	5.83
299500, 092500	6.21	9.65	5.65
300500, 092500	5.85	9.94	5.73
301500, 092500	5.42	9.63	5.62

2.2.2 The annual mean air quality objective for NO_2 is 40µg/m^3, 40µg/m^3 for PM_{10} and 25µg/m^3 for $PM_{2.5}$. The background concentrations for the site, as detailed in Table 1, are below these objectives.

3 POTENTIAL AIR QUALITY IMPACTS

3.1.1 Sensitive locations are those where the public may be exposed to pollutants generated by the construction or operation of the proposed development site. These will include locations sensitive to an increase in dust deposition, as a result of on-site construction activities, or exposure to gaseous pollutants, from exhaust emissions from construction traffic and traffic associated with the proposed development, or industrial premises. Examples of locations that are sensitive to dust and particulate matter generated by construction activities include residential dwellings, hospitals, schools, care homes and commercially sensitive horticultural land.

3.2 Construction

3.2.1 During the construction phase, activities undertaken on a development site have the potential to cause dust and particulate matter to be emitted to the atmosphere. If transported beyond the site boundary, dust and particulate matter can have an adverse impact on local air quality at nearby sensitive receptors, unless suitable mitigation measures are applied at source. Dust deposition, resulting in the soiling of surfaces, may result in complaints of nuisance through amenity loss or perceived damage caused, although this is usually temporary. The implementation of effective mitigation measures during the construction phase will substantially reduce the potential for nuisance dust and particulate matter to be generated and any residual impact should be 'not significant'.

3.2.2 Exhaust emissions from construction vehicles could have an impact on local air quality, both on-site and adjacent to the routes used by these vehicles, to access the construction sites. The greatest impact on air quality will be in the areas immediately adjacent to the site access for construction traffic. The atmospheric emissions of most concern, from construction vehicles, will primarily be NO_2 and PM_{10}. However, this is not considered to pose a constraint to development within the site, given the current good standard of local air quality in the area and the fact that any change will be temporary (i.e., last for the duration of the construction works only).

3.2.3 There are a number of residential properties close to the potential construction works which could experience an increase in dust deposition during the construction of the development site.

3.2.4 While there are a number of designated habitat sites in the wider area, due to the distance of the sites from the development red line boundary, more than 2km away, they should not be adversely affected by construction dust.

3.3 Operation

Existing Sensitive Receptors

3.3.1 The proposed development would generate additional road traffic and will cause a redistribution of existing traffic on the local road network. There is the potential for adverse effects on local air quality to occur at properties located close to roads where traffic flows are predicted to increase as a result of the operation of the development.

3.3.2 The Defra background pollutant concentrations at the site (as detailed in Table 1) are within the relevant annual mean air quality objectives and, as a result, any slight increase in pollutant concentrations for both NO_2 and PM_{10} would not cause any air quality objectives to be approached or exceeded at existing receptor locations in the local area. A review of traffic data would have to be undertaken, in line with relevant guidance, to determine the potential for any impact on air quality in the surrounding area resulting from the operation of the proposed development. This would inform the development of the assessment methodology. Traffic data must incorporate committed developments in order to appropriately assess cumulative impacts.

3.3.3 A suitable mitigation strategy, proportionate to predicted development impact, will need to be identified within the full air quality assessment.

3.3.4 It is noted that the development site is positioned close to a number of designated habitat sites in the wider area. Therefore, these designations will need to be considered in a detailed air quality assessment.

Proposed Sensitive Receptors

3.3.5 From an air quality perspective, it is not considered that there are any significant constraints on the masterplanning for the site, as the local background pollutant concentrations are below the air quality objectives and target levels. However, some local roads are major roads such as the A30 which carries a large volume of traffic.

3.3.6 As highlighted by EDDC, there are concerns around the proximity of the proposed development to Hill Barton Business Park and Greendale Business Park. A review of both these business parks has been undertaken.

Hill Barton Business Park

3.3.7 The business park is occupied by a large number of commercial/industrial premises, which are focussed on the waste industry.

3.3.8 Table 2 below identifies the premises which have the potential to cause air quality impacts and the controls that they have in place. Of note, the controls identified have been found through a search of the Environments Agency's (EA) Public Register and EDDC Planning Portal. It is possible that there may be further controls in place or other businesses with the potential to cause air quality impacts, however this information was not publicly available.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact

Premises	Description of Business	Potential Air Quality Impact/Controls in Place
RWD Kwikform (South West)	• Supplier of construction equipment and materials • Equipment/materials are stockpiled on site • Seems to comprise of solid materials e.g., metal/wooden beams, struts	Due to the nature of the business, there are no emission or dust sources which could cause an impact. All materials are stored on site and no materials are of a dust generating nature. The impact is assumed to be negligible.
EMS Waste Services	• Waste Transfer Station • Take construction / demolition waste, household waste, asbestos and bonded waste, WEEE waste and farm plastic • Waste is sorted, recycled or disposed • Type of recycling offered are: cardboard, glass, plastic, wood, metal, garden and green waste, inert waste	Potential for dust emissions. due to the handling and disposal of waste. The business is operated under two EA issued permits: • S0805 No 5-75kte Household, Commercial and Industrial Waste Transfer Station and asbestos (permit number BP3898VD) • A9: Special Waste Transfer Station (permit number GM3403MT)
Brooker Energy Exeter	• Combined Heat and Power plant • Receive waste (refuse derived fuel) from local Materials Recovery Facilities (MRFs) • Also produce dry wood chip for biomass boilers	Potential for emissions to air from CHP plant. The CHP plant is operated under a Local Authority issued A2 permit (permit number EP/00137) for waste operations and a small waste incineration plant. The permit details the requirements to control and monitor emissions, with set targets for each pollutant of concern.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Air Quality Impact/Controls in Place**

Hil Barton Landfill	• Landfill for inert waste
	• Authorised Waste:
	  ○ Devon Cat.A: Inert Waste
	  ○ Devon Cat.B: General Waste
	  ○ Max.Waste Permitted by Licence
	• Prohibited Waste:
	  ○ Dust/Ash/Powder/Particulate
	  ○ Liquid Wastes
	  ○ Mat'L Contam. Above ICRCL Action Level
	  ○ Sludge Wastes
	  ○ Waste N.O.S.
	• Wash plant on site – mix inert waste and turn into reusable products (if possible)
	• Also crush hardcore material for resale
		Potential for dust emissions, due to handling of waste which could generate dust. The business is operated under two EA issued permits:
		• LO5: Inert Landfill (permit number DB3500TT)
		• A16: Physical Treatment Facility (permit number CB3100UB)
		The landfill also has a Local Authority issued PG3/16 Mobile screening and crushing processes permit (permit number EP/00053)

Hill Barton Incinerator	• Process commercial and industrial waste in the form of RDF through gasification • Process and store incinerator bottom ash (IBA) • Steam is generated to power a turbine for electricity generation.	Potential for emissions to air from incinerator and dust from IBA. The site has been designed in accordance with Best Available Techniques (BAT) and the air quality assessment undertaken in 2020 predicted no exceedances of EALs. A dust management plan is in place for the site (reference Ricardo/ED12301/Issue Number 1, attached to planning application 19/1367/CM). No permits could be found publicly however it is assumed one would be in place.
Hill Barton Compositing Facility	• Creation of compost from recycled material • Shredder breaks down material and then screened to correct size	Potential for dust emissions from stockpiles. The business is operated under EA permit A22: Composting Facility (permit number EX3601XA)

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Air Quality Impact/Controls in Place**
	• The compost is then allowed to mature in stockpiles	

UK Remediation Ltd	• Soil treatment facility - Accept wide variety of hazardous and non-hazardous soils including heavy metals and hydrocarbon contaminated materials such as:
	  ○ Soils and aggregates
	  ○ Construction wastes
	  ○ Dredging spoils
	  ○ Drilling muds
	  ○ Sludges & street-cleaning residues
	• Sustainable and landfill tax-free
		Potential for dust emissions from material handling and processing. The business is operated under EA permit A23: Biological Treatment Facility (permit number LP3939TS).

Tarmac Exeter Asphalt Plant	• Plant producing asphalt – a process in which aggregates, binder and filler are mixed together	Potential for dust and emissions to air from mixing process. The business is operated under a Local Authority issued PG3/15 Mineral drying and roadstone coating processes permit (permit number EP/00082)
AE Stuart and Sons	• Agricultural and Farm Contractors • Drying plant for grain processing	Potential for dust emissions however no permits relating directly to this business could be found. It was found AE Stuart and Sons also run the Hill Barton Landfill which is operated under several permits and therefore it is assumed the business is also ran in a similar way.
Kloechner Metals UK	• Metal processing and manufacturing	Potential for dust emissions from processing however no permits relating directly to this business could be found. From aerial imagery it appears there are no external works and outside areas are used for stockpiling only. Due to the nature of the material, stockpiling of metal would not be a source of dust.

Table 2: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Air Quality Impact/Controls in Place**
BT Jenkins Ltd	• Earthmoving and plant hire business • Crushing and screening of minerals	Potential for dust emissions form crushing and screening. The business is operated under a Local Authority issued PG3/16 Mobile screening and crushing processes permit (permit number EP/00047)

3.3.9 A review of the business park shows that all other site occupiers do not appear to operate businesses which have the potential to cause air quality impacts.

3.3.10 As stated by EEDC, there is a concern that the presence of the development would impact the mineral safeguarding zone. As identified above, the processes at Hill Barton Business Park are controlled by permits or management plans that are in place, to ensure there is no impact to workers or nearby residential receptors. Although there are existing residential receptors close to the business park, the masterplanning process could ensure that stand-offs to Hill Barton Business Park are incorporated, to reduce any impact to both proposed receptors and occupiers of Hill Barton Business Park. This would ensure that the introduction of receptors would not have a negative effect on their continued working.

Greendale Business Park

3.3.11 The business park is occupied by a large number of commercial/industrial premises, which are focussed on the delivery industry.

3.3.12 Table 3 below identifies the premises which have the potential to cause air quality impacts and the controls that they have in place. Of note, the controls identified have been found through a search of the Environments Agency's (EA) Public Register and EDDC Planning Portal. it is possible that there may be further controls in place or other businesses with the potential to cause air quality impacts, however this information was not publicly available.

Table 3: Identified Premises at Hill Barton Business Park with the potential to cause impact		
Premises	**Description of Business**	**Potential Air Quality Impact/Controls in Place**
Jet Set	• Sand and gravel supplier • Ready-Mix Concrete supplier	Potential for dust emissions from processing however no permits relating directly to this business could be found. It is assumed a Local Authority issued permit would be in place (assumed title PG3/15 Mineral drying and roadstone coating processes)
Viridor Waste Management Ltd	• Waste management service	Potential for dust emissions and emissions to air, however no permits relating directly to this business could be found. It is assumed should there be emissions to air, an EA permit would be in place. As Viridor is a nationwide company, it is assumed all necessary permits/management plans would be in place.
Natural Horse Bedding	• Timber merchant	Potential for dust emissions if wood is cut on site however no permits relating directly to this business could be found. From aerial imagery it appears there are no external works, therefore dust potential should be minimal.
SUEZ recycling and recovery UK	• Waste management service	Potential for dust emissions and emissions to air, however no permits relating directly to this business could be found. It is assumed should there be emissions to air, an EA permit would be in place. As SUEZ is a nationwide company, it is assumed all necessary permits/management plans would be in place.

3.3.13 A review of the business park shows that all other site occupiers do not appear to operate businesses which have the potential to cause air quality impacts.

3.3.14 The processes at Greendale Business Park should be controlled by permits or management plans, to ensure there is no impact to workers or nearby residential receptors. Although there are existing residential receptors close to the business park, the masterplanning process could ensure that stand-offs to Greendale Business Park are incorporated, to reduce any impact to both proposed receptors and occupiers of Greendale Business Park. This would ensure that the introduction of receptors would not have a negative effect on their continued working.

3.4 Meteorological Conditions

3.4.1 An understanding of meteorological conditions at the site is beneficial in the highlighting of areas of concern. Of interest is the predominant wind direction, as wind can carry dust away from potential sources and deposit on sensitive receptors.

3.4.2 A wind rose from the Exeter Airport meteorological station (Figure 1 below), the closest station to the proposed development, over the period 2018 – 2022, indicates the predominant wind direction is from the south.

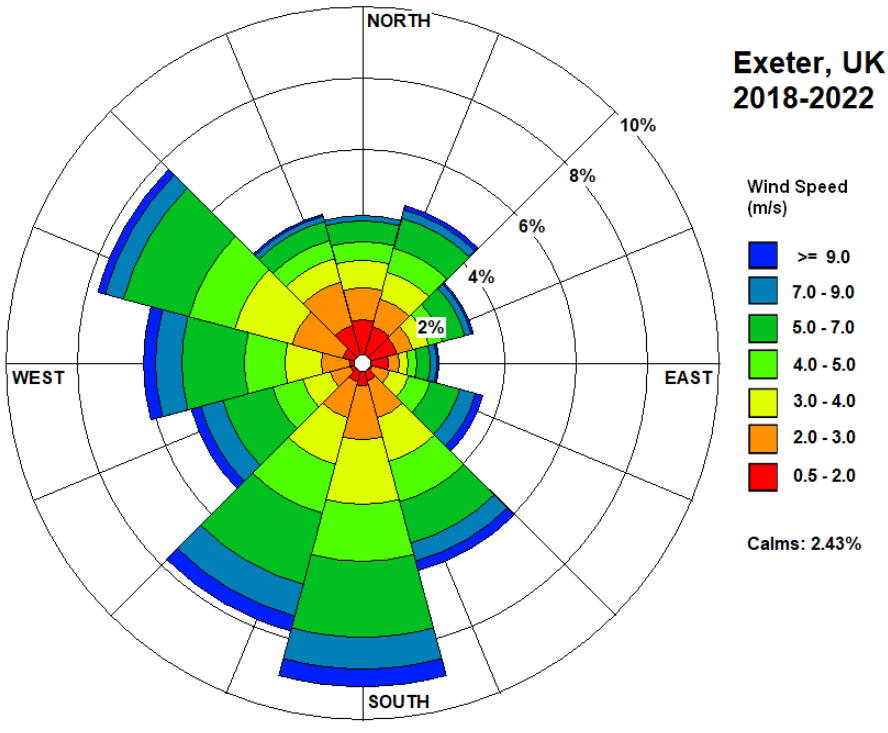

Figure 1: Meteorological data from the Exeter Airport Meteorological Station 2018 - 2022

3.4.3 The majority of businesses at Hill Barton Business Park, who have the potential to cause an air quality impact, are located to the northeast side of the business park.

Therefore, receptors North of this location would be in a downwind location, which increases potential for susceptibility to dust deposition. It is however generally accepted and recognised in the Institute of Air Quality Management (IAQM) Minerals Guidance[1] that the greatest dust impacts and deposition will be within 100 m of a source. he majority of the extensive Option 1 site area (to the North of the Business Park) will be well beyond this 100m distance. The risk of susceptibility to dust deposition could be reduced with an appropriate stand-off, and by considering the arrangement of land uses within the site.

3.4.4 Greendale Business Park is over 600m south of the development site. At this distance, any potential generated dust will have already deposited before reaching proposed receptors.

3.4.5 Therefore, the masterplanning process could take into account those areas which would be downwind of a potential dust source at Hill Barton and Greendale Business Park and design the layout to suit.

[1] Institute of Air Quality Management, 2016. Guidance on the Assessment of Mineral Dust Impacts for Planning.

4 OPPORTUNITIES TO MINIMISE IMPACTS

4.1.1 In relation to vehicle emissions associated with the development, it may be possible to reduce any potential air quality impacts by including the implementation of physical and operational travel plan measures. Such measures could include:

- EV charging points;
- Travel Plan (where required), including mechanisms for discouraging high emission vehicle use and encouraging the uptake of low emission fuels and technologies;
- Designation of parking spaces for low emission vehicles;
- Incentives for the take-up of low emission vehicle technologies and fuels; and
- Support local walking and cycling initiatives.

4.1.2 In relation to Hill Barton and Greendale Business Parks, stand-offs could be implemented to ensure that potential impacts are minimised. Although permits and management plans are in place, a more in-depth review of operations at both business parks would ensure that the masterplan takes into account more sensitive operations.

5 SUMMARY OF AIR QUALITY CONSTRAINTS

5.1.1 A summary of the potential air quality constraints related to the proposed development is given below.

Construction Phase

5.1.2 Potential air quality effects during construction include:

- Increase in dust deposition at nearby sensitive receptors (including residential) during construction; and
- Decrease in air quality caused by construction vehicles using the local road network.

Operational Phase

5.1.3 Potential air quality effects during operation include:

- Generation of additional traffic on the local road network resulting in changes in local air quality, particularly localised changes in concentrations of NO_2 and PM_{10}; and
- Introducing receptors in proximity to Hill Barton and Greendale Business Parks.

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Appendix 5: Sustainable Access and Highways (Jubb, January 2023)

Title: East Devon Options Appraisal Representation – 2nd Issue

Date: January 2022

1.0 Introduction

1.1.1 Jubb have been commissioned by Bloor Homes Ltd and Stuart Partners (referred to as "the Client" for the remainder of this note) to provide transport and highways representation in response to site assessment as presented within the 'East Devon – Options Appraisal for a potential New Settlement' (EDOA) report as published in October 2022 by East Devon District Council (EDDC). This representation has been produced in a response to a call for consultation input from EDDC to further inform the options appraisal.

1.1.2 The representation note considers the EDOA in the context of the proposed Denbow community to the East of Exeter which broadly accords with Option 1 of the three areas as reviewed for potential allocation within the EDOA.

1.1.3 The EDOA has reviewed the site against a number of key criteria encompassing:

- Landscape Sensitivity
- Ecological Impact / Biodiversity
- Flood Risk
- Minerals
- Historic Environment
- Sustainable Accessibility
- Highways
- Utilities
- Net Zero Carbon
- Climate Resilience
- Deliverability

1.1.4 This representation Technical Note (TN) considers the Sustainable Accessibility and Highways elements of this review with other elements responded to by others.

1.1.5 The representation includes the following content:

- **Section 2**: Outlines the three options as assessed within the EDOA which includes a brief description and site location plan for each option.
- **Section 3**: Provides a response to the Sustainability Appraisal as set out within the EDOA
- **Section 4**: Provides a response to the Highways appraisal as set out within the EDOA

1.1.6 In addition, an associated summary is included as **Section 5**.

2.0 Options reviewed within the EDOA

Introduction

2.1.1 This Section provides details of the three options as set out within the EDOA. This encompasses a brief description and site location diagrams as extracted from the EDOA.

Details of Reviewed Options

2.1.2 As discussed in **Section 1** the EDOA reviews three potential options for land allocation which consist of Option 1 and two further sites, i.e. Option 2 and 3, which are described below:

- Option 1: Land located between the A30 and A3052
- Option 2: Land located either side of the A3052
- Option 3: Land located between the A3052 and A376

2.1.3 The associated site areas in relation to these options have been extracted from the EDOA report and are presented as **Figure 2.1** (Option 1), **Figure 2.2** (Option 2) and **Figure 2.3** (Option 3) for the purpose of clarity.

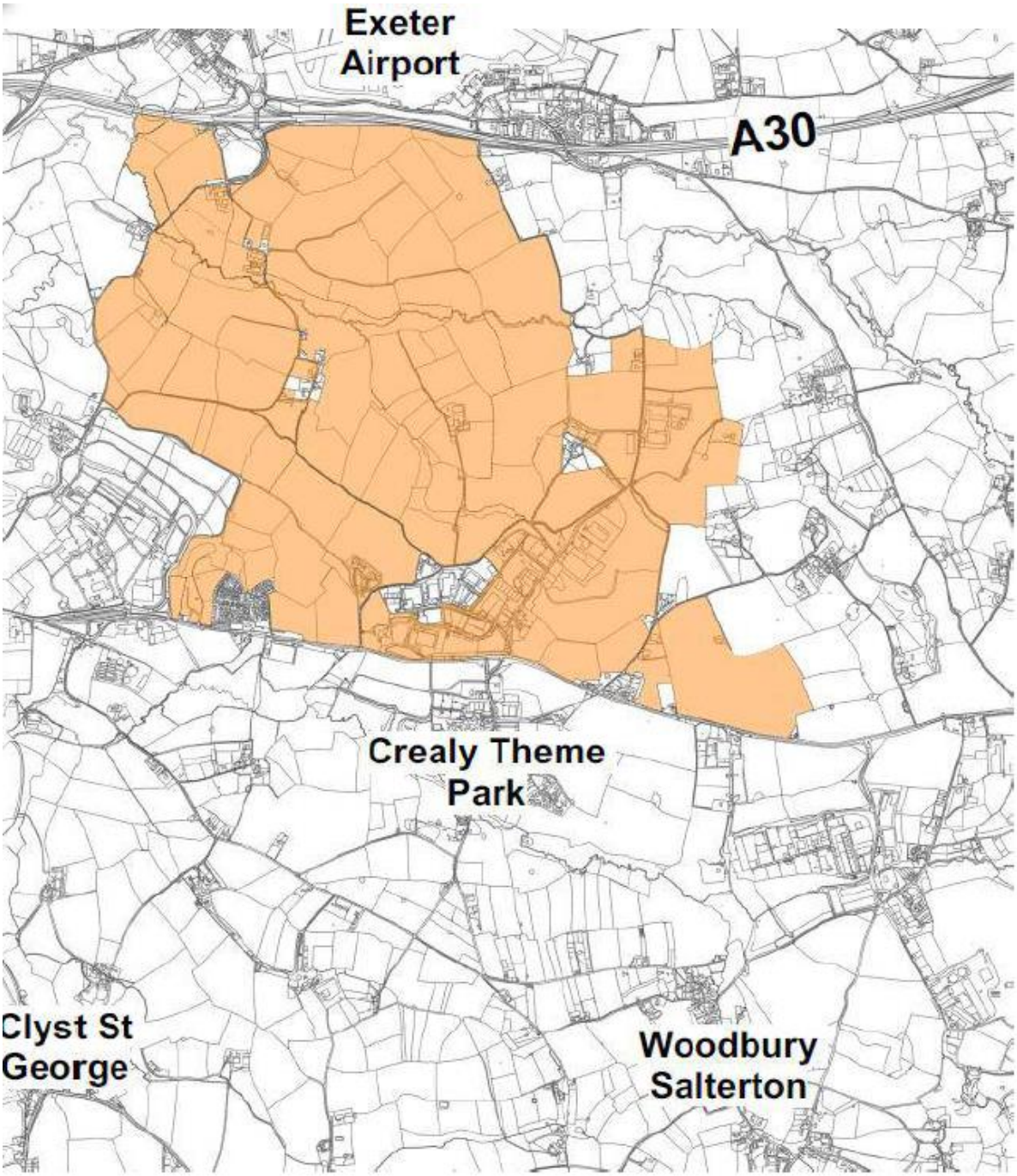

Figure 2.1 – Option 1 Area as Extracted from Figure 3.3 of the EDOA

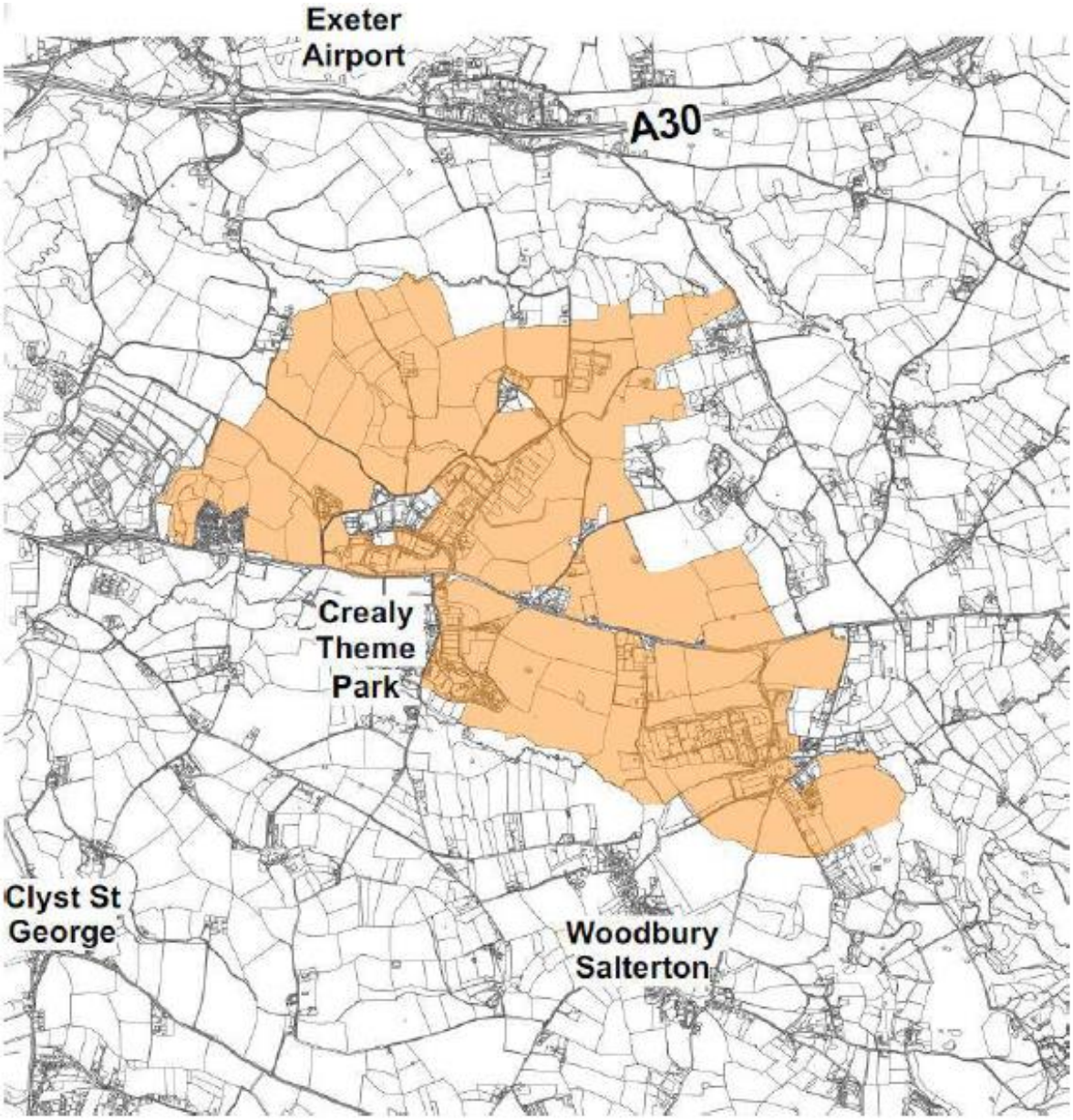

Figure 2.2 – Option 2 Area as Extracted from Figure 3.5 of the EDOA

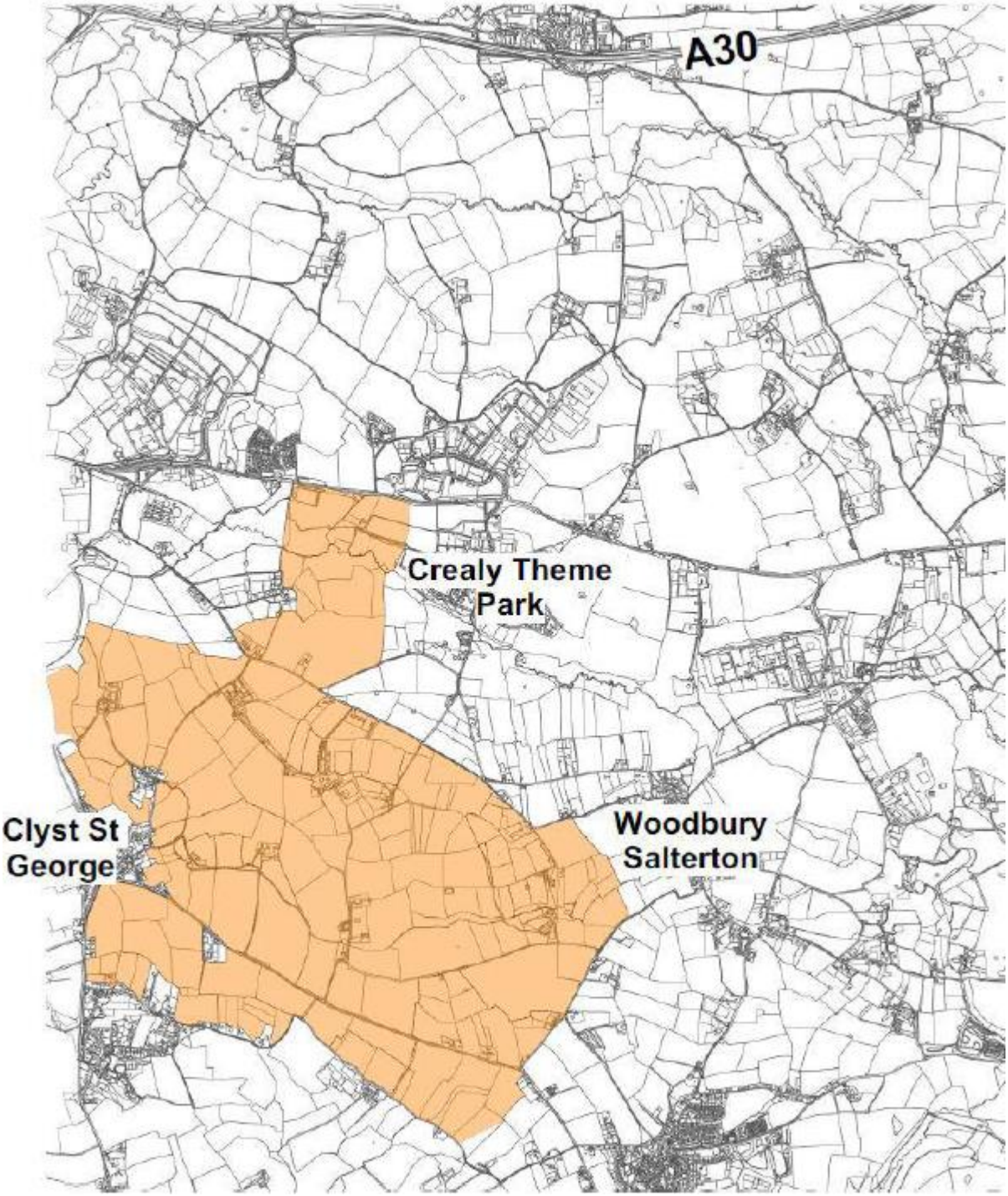

Figure 2.3 – Option 3 Area as Extracted from Figure 3.7 of the EDOA

Summary

2.1.4 The location of the three options appraised in the EDOA are outlined above. A review of the Sustainable Accessibility and Highways scoring relating to these options is provided in **Section 3** and **Section 4** respectively of this TN.

3.0 Sustainable Accessibility

Introduction

3.1.1 This section reviews the assessment of Sustainability Accessibility as set out in the EDOA. The Sustainability Accessibility is assessed within the "East Devon New Community – Sustainable Access Review of Option Sites" document as produced by Hydrock in October 2022 (referred to as the Hydrock Report for the remainder of this TN) and included as Appendix B of the EDOA. The Hydrock report provides an overall score for Sustainable Accessibility based on a review of the following subcategories.

- Walking Connectivity
- Cycle Connectivity
- Public Transport Connectivity
- Existing Employment Context

3.1.2 The calculation of overall scoring relating to Sustainability Accessibility is based on the average score provided for each of these subcategories and is summarised within Table 7.6 of the EDOA and recreated as **Table 3.1** below.

Assessment Category	Option 1	Option 2	Option 3
Walking	3	1	4
Cycling	3	2	4
Public Transport	4	2	5
Employment	5	2	4
Total	**15**	**7**	**17**
Average	**3.8**	**1.8**	**4.3**

Table 3.1 – Sustainable Accessibility Scoring – all modes (as extracted from Table 7.6 of the EDOA)

3.1.3 A review of the considerations used to score each subcategory is provided below.

Walking Connectivity

3.1.4 The assessment considers destinations within a walkable distance in the vicinity of each option and considers the quality of associated routes. In this regard the assessment has correctly identified the proximity of Exeter skypark and associated employment facilities to the north of the Option 1 site as a key advantage relating to this site.

3.1.5 It is however recommended that further consideration should also be given to planned proposals that would also introduce further facilities within walking distance of a proposed community. For instance, no discussion is currently provided within the Hydrock Report in relation to the committed growth at Cranbrook which would also introduce a local centre, education, and employment facilities within a walkable distance of the Option 1 site. Details of these proposals are set out in **Figure 3.1** below that provides an extract of the masterplan as included as Figure 8 of The Cranbrook Plan adopted by East Devon in October 2022. Linkages through to these proposals are already provided via the B3184 A30 overbridge and Clyst Honiton Bypass / London Road and these committed facilities would be accessible from a reasonable walking distance (typically identified as 2km) from a large area within the north of Option 1.

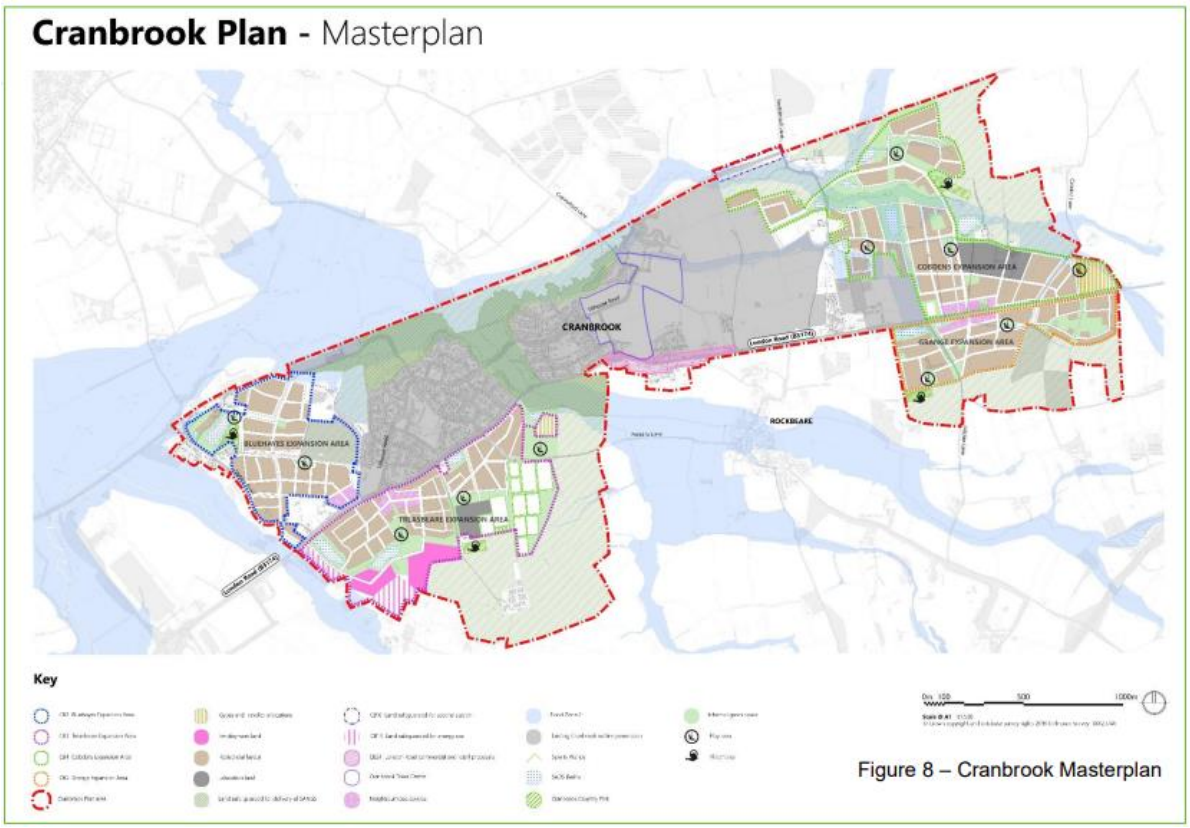

Figure 3.1 – Cranbrook Masterplan as included as Figure 8 of The Cranbrook Plan

3.1.6 In addition, consideration should also be given to the high quality walking / cycling routes that allow connection towards Exeter, across the M5 and into the Sowton industrial estate. Further discussion in relation to this are provided within the "Cycle Connectivity" section below.

Cycle Connectivity

3.1.7 In terms of cycling the proximity of National Cycle Network Route 2 (NCN 2) and its associated connection to Exeter is identified as a key advantage for Option 3 in the Hydrock Report, which also provides this option with the highest cycling score. However, whilst the report also highlights the benefits of links on Honiton Road in relation to Option 1, the key advantages associated with these linkages as a route towards the M5 and into Exeter have not been emphasised. As set out below this high quality connection offers greater benefits locally when compared to the connection provided by NCN 2.

3.1.8 **Figure 3.2** below sets out the cycle routes across the M5 from the Option 1 site via Honiton Road. This includes a route which continues along the road and crosses the M5 via signalised crossings at the Junction 29 underpass, as well as an additional route that continues along Blackhorse Lane before crossing the M5 via a segregated active travel link and bridge just north of Junction 29. These routes provide a connection with Exeter via a 3km cycle from the Option 1 site and are easily accessible via Bishops Court Lane and the A30 overbridge. Moreover, the routes also provide a connection with Exeter Science Park, Exeter Business Park, and the Sowton industrial estate representing key employment areas both within and on the outskirts of Exeter.

3.1.9 Contrastingly the connection to Exeter from the Option 3 site via NCN 2 (also shown on **Figure 3.2**) is longer (almost 4km). Furthermore, the point of connection is also a residential area with no key destinations nearby that would likely provide a key draw for cyclists. Thus, it appears that the advantages of this route could be overstated especially when compared to connections to the north linking with the Option 1 site.

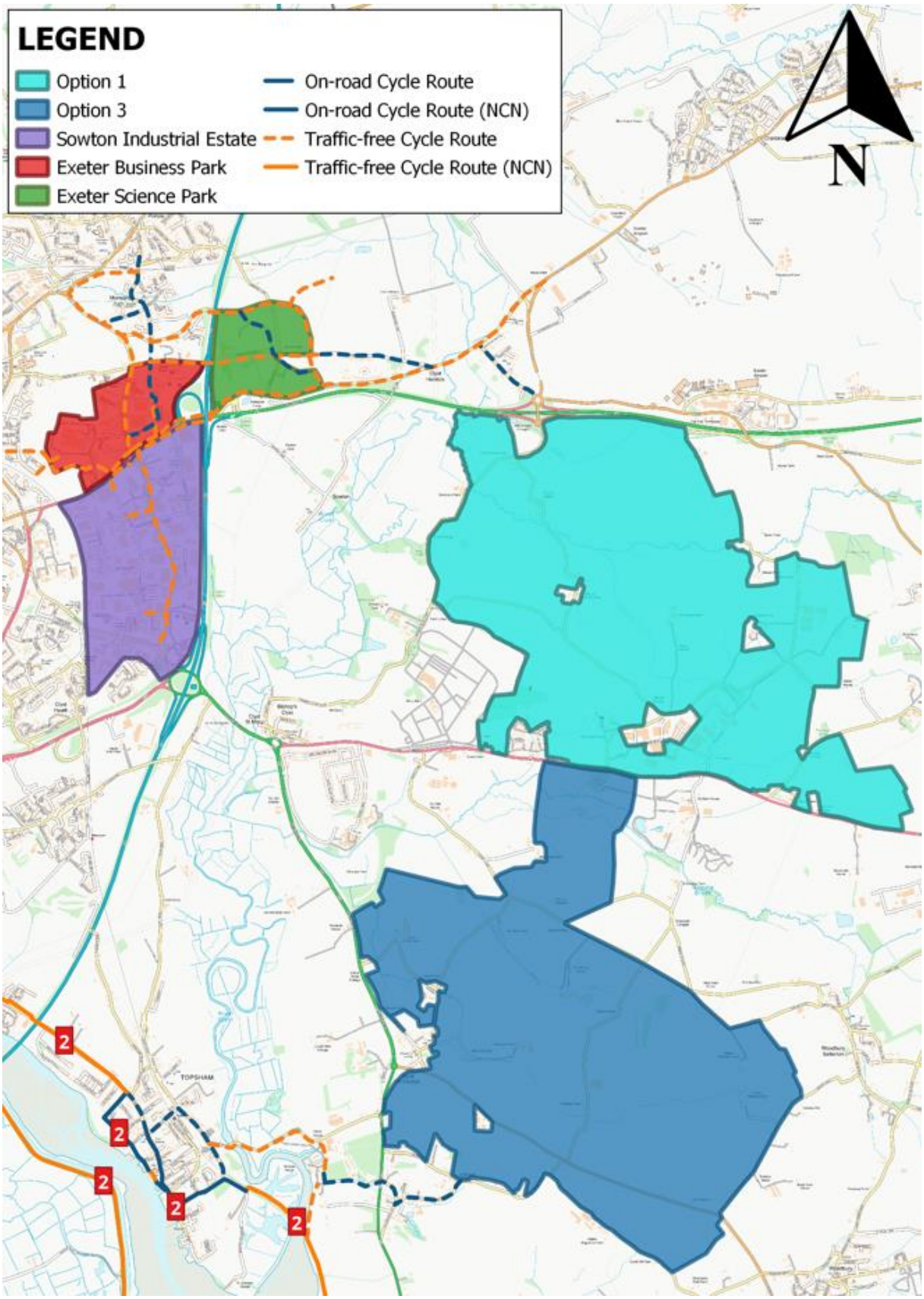

Figure 3.2 – Comparison linkages to Exeter north of Option 1 site with NCN 2 connection linking with Option 3

3.1.10 The advantages of the route north of Option 1 also appears to be reflective in the Strada heat map as shown in Figure 4-4 of the Hydrock Report and extracted as **Figure 3.3** below which shows high usage along this route. Furthermore, whilst the A376 has been flagged as having high usage (as a potential benefit for Option 3) the use of this route north of Option 1 has not been flagged despite appearing to have even higher usage on the heat map.

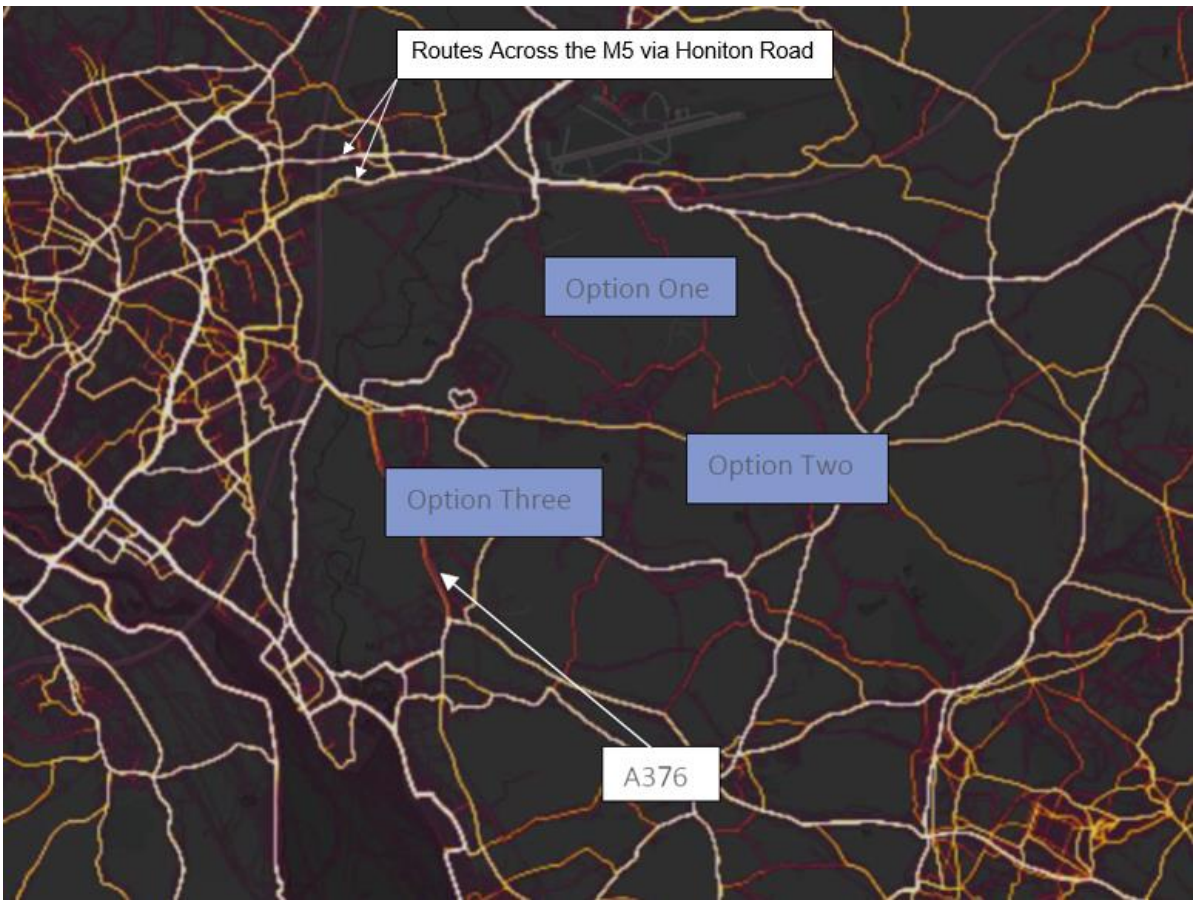

Figure 3.3 – Strada cycle heatmap as extracted from Figure 4-4 of the Hydrock Report (label showing routes off Honiton Road added for clarity)

3.1.11 The Hydrock Report also identifies the large area of the Option 1 site as a constraint, on the basis, it is argued, that this would increase cycle times from the centre point to surrounding areas of the site. It is however noted that the scale of the proposals is 521 hectares which is in fact smaller, although broadly in accordance, with Option 2 (521.5 hectares) and Option 3 (523.2 hectares). Notwithstanding this the aim of the EDOA is to assess the merits of each options location rather than scale especially given that each site can be planned with appropriate active travel connections to ensure high quality linkages.

3.1.12 Consideration should also be given to the committed facilities within the Cranbrook proposals to the north of the site as referred to above in the "Walking Connectivity" review. These facilities would be accessible via a convenient cycle ride (typically under 5km) from the entirety of the Option 1 proposals.

Public Transport Connectivity

3.1.13 The Hydrock Report correctly identifies the potential for Park & Ride to be delivered at the Option 1 site that would both ease congestion on the A30 route and serve to enhance bus patronage. However, what should also be emphasised is the existing high quality grade separated junction that already exists on the network (i.e. the B3184 / A30 junction) that already allows connection with the Option 1 site via Bishop's Court Lane.

3.1.14 Whilst Option 3, which is scored the highest for public transport accessibility in the Hydrock Report, is located adjacent to the A376 which could also benefit from the introduction of a Park & Ride site, there are currently no high capacity junctions in the vicinity of the site frontage that could be connected with to allow the efficient movement of buses on and off the network. Thus, it may be the case that a new junction would need to be provided to cater for this or an existing junction enhanced through significant enlargement and extensive remodelling. However, there is limited frontage for the site onto this road to deliver this, particularly given that the village of Clyst St George is located centrally on this frontage which would prevent access in this area.

Existing Employment Context

3.1.15 The Hydrock Report correctly identifies the key advantages of the Option 1 site in terms of employment given that it is located in close proximity to not only Hill Barton and Greendale Business Parks but also, unlike Option 2 and 3, Exeter SkyPark, Science Park and Airport. However, what should also be considered is the additional employment that will be provided in the Cranbrook Plan which included approximately 5ha of employment within the Treasbeare Expansion Area.

Summary

3.1.16 Based on the above observations it is evident that Option 1 site should be provided with overall higher scores (relative to Options 2 and 3) across all elements of the assessed Sustainability Accessibility criteria. On this basis it is recommended that these criteria be reviewed with the overall Sustainability Accessibility criteria adjusted upwards for Option 1 relative to Options 2 and 3.

3.1.17 A suggested revised scoring, accounting for the aforementioned additional considerations, has therefore been set out as **Table 3.2** below.

Assessment Category	Option 1	Option 2	Option 3
Walking	4 (+1)	1	4
Cycling	4 (+1)	2	3 (-1)
Public Transport	5 (+1)	2	5
Employment	5	2	3 (-1)
Total	**18 (+3)**	**7**	**15 (-2)**
Average	**4.5 (+0.7)**	**1.8**	**3.8 (-0.5)**

Table 3.2 – Revised Sustainable Accessibility Scoring

4.0 Highways

Introduction

4.1.1 This section reviews the assessment of Highways as set out in the EDOA. The Highways assessment is based on the Highways Impact Modelling Report as produced by WSP in October 2022 (as referred to as the WSP Report for the remainder of this TN) which was included as Appendix D of the EDOA. On this basis Jubb's review of Highways considers both the content of the EDOA and the WSP Report.

Highways Review

4.1.2 The Highways assessment as set out within the EDOA and WSP Report has demonstrated, as expected, that Option 1 would have the least impact on the offsite highway network for the assessment period and associated forecast housing delivery up to 2040. Moreover, this is the only option forecast to not require significant offsite highway mitigation during this period with both Option 2 and 3 identified as likely requiring an enhancement of the A3052 / A376 Roundabout (referred to as the Clyst St Mary Roundabout) and further local enhancement beyond this identified as being required for Option 2.

4.1.3 This assessment is summarised in Table 8.3 of the EDOA, which is also extracted as **Table 4.1** below, that sets out the traffic impact on each route for each option and scores the associated deliverability in terms of the ability to accommodate traffic on each point on the network (i.e. either through existing available capacity or through mitigation).

Assessment Category	**Option 1**		**Option 2**		**Option 3**	
	Impact	**Deliverability**	**Impact**	**Deliverability**	**Impact**	**Deliverability**
M5 J29	5	5	5	5	5	5
M5 J30	5	5	4	5	4	5
M5 J31	5	5	5	5	5	5
A30	5	5	5	5	5	5
A3052	4	5	4	5	4	5
A38 & A380	5	5	5	5	5	5
Clyst St Mary Junction	3	4	1	4	1	4
East of Exeter Network Impacts	5	5	1	2	5	5
Total	**37**	**39**	**30**	**36**	**34**	**39**
Impact & Deliverability Average	**38**		**33**		**36.5**	
Average	**4.8**		**4.1**		**4.6**	

Table 4.1 – Highways Delay Impact and Mitigation Summary as Extracted from Table 8.3 of the EDOA

4.1.4 Whilst the scores within the EDOA report do identify Option 1 as scoring higher for highways, given that Option 1 is the only option that is assessed within the WSP report as not requiring significant offsite mitigation it is considered that a higher relative score should be attributed to this option. Furthermore, there are also a number of additional considerations that would enhance the score of Option 1 relative to Option 2 and 3 that are set out below.

4.1.5 It is noted that the modelling as discussed in the WSP Report and reviewed for the Highways assessment of the EDOA has been based on the delivery of 2,500 dwellings up to the period of 2040. However, the vision for the second new settlement at East Devon is for the delivery of 8,000 dwellings and therefore the future adaptability of the site to enable this much larger provision should also be considered.

4.1.6 The location of Option 1 between two key corridors (i.e. the A30 and A3052) would provide a number of route options not only towards Exeter but also east towards Honiton and Sidford. By contrast Options 2 and 3 are located in the vicinity of route corridors that would concentrate westbound traffic at two key junctions (i.e. the Clyst St Mary Roundabout and Junction 30 of the M5). Thus, whilst at present Option 3, which is currently assessed within the EDOA as the next most favourable option in Highways terms after Option 1, is shown as having equal scores in terms of deliverability to the Option 1 site, it is considered that as further traffic is added to the network (i.e. in excess of the 2,500 already assessed in the WSP Report) there would more likely be further issues identified at the Clyst St Mary Roundabout and Junction 30 of the M5. In this regard, whilst the model in the WSP Report has not assessed the impact further than 2,500 dwellings, recognition should be given to the likely issues that could develop beyond this level with the associated scores reduced on Option 2 and 3 relative to Option 1.

4.1.7 On review of the WSP Report it is also noted that the access road for Option 1 has also been coded as 20mph to prevent through traffic. However, it is likely that this road would act in a dual function to both provide for movement across the corridor whilst still maintaining permeability for active travel modes across it. In this regard it is considered more likely that the road would operate as a 30mph road and therefore the inclusion of two access points across two existing key movement corridors would provide significant advantage by allowing any impact to be efficiently dispersed towards each corridor as appropriate and not concentrated in any one specific point (for example in relation to the western approach to Exeter from Options 2 and 3).

4.1.8 In addition, whilst it is not clear whether this has been modelled within the assessment, the ability of the Option 1 site to deliver a Park & Ride on the A30 would also provide significant benefit in terms of reduced traffic congestions as well as an offset to the traffic generation of the proposals. Furthermore, a smaller park and ride could also be introduced on the A3052 route that could also add benefit and offset impact on the Clyst St Mary Roundabout and Junction 30 of the M5.

Summary

4.1.9 Whilst the scores within the EDOA report do identify Option 1 as scoring higher for highways, given that Option 1 is the only option that is assessed within the WSP report as not requiring significant offsite mitigation it is considered that a higher relative score should be attributed to this option. Furthermore, there are also a number of additional considerations that would enhance the score of Option 1 relative to Option 2 and 3 including the point summarised below.

4.1.10 It is evident that the location of the site between the A30 and A3052 would enable effective dispersion of traffic and unlike Option 2 and 3 would prevent the concentration of traffic. This is of particular relevance given that the proposed option should provide associated housing not only for the earlier planning period (i.e. up to 2040) but should also provide the flexibility to create a community of up to 8,000 dwellings in future planned periods. In this regard it is considered that Options 2 and 3 should be scored lower relative to Option 1 given that congestion is likely to significantly worsen at the Clyst St Mary Roundabout and Junction 30 of the M5 if further units were added beyond the 2,500 as currently assessed.

4.1.11 A suggested revised scoring, accounting for the aforementioned additional considerations, has therefore been set out as **Table 4.2** below. This scoring is based on the evidence as presented in the WSP report as well as additional considerations presented.

Option 1	Option 2	Option 3
4.8	3.1 (-1)	3.6 (-1)

Table 4.2 – Revised Highways Scoring

5.0 Summary and Conclusions

5.1.1 It is evident that Option 1 has been assessed as the preferred option within the EDOA. Notwithstanding this, on review of the scoring associated with Sustainability Accessibility and Highways criteria there are a number of additional considerations that have been identified in this TN that means that scoring for these criteria should be enhanced relative to the other reviewed options (i.e. Options 2 and 3). These considerations are set out below:

- Option 1 is located in close proximity to the development proposals as set out within the Cranbrook Plan that will bring more facilities and employment in close proximity to the north of the A30 which would be accessible by active modes of transport
- It has the advantage of being located adjacent to connecting active travel links to the north that provide access across the M5 and to nearby employment. These routes are more direct and provide connection to a key pedestrian / cyclist draw (i.e. key employment) which is in contrast to links connecting with Option 2 and 3 that, in the vicinity of the sites, do not connect with key Exeter destinations.
- The Option 1 proposals would allow the introduction of a Park & Ride site along the A30 via an existing high quality grade separated junction. Whilst Option 2 could also provide a Park & Ride on the A376 space for high quality junction connection is limited.
- The location of Option 1 between the A30 and A3052 would enable a dispersion of traffic unlike Option 2 and 3 that are concentrated on routes southwest of Exeter that converge at the Clyst St Mary Roundabout and Junction 30 of the M5.

5.1.2 Thus, it is recommended that the associated scoring within the EDOA be adjusted to widen the gap between Option 1 and the other assessed sites that should show even lower scores by comparison. Details of these recommended adjustments are provided as **Table 5.1** below.

Assessment Category	Option 1	Option 2	Option 3
Sustainability Accessibility	4.5 (+0.7)	1.8	3.8 (-0.5)
Highways	4.8	3.1 (-1)	3.6 (-1)

Table 5.1 – Total revised Sustainability Accessibility and Highways scoring

Appendix 6: Net Zero Carbon and Climate Resilience Review (Turley Sustainability, Jan 2023)

East Devon – Options Appraisal for a potential New Settlement [Zero Carbon and Climate Resilience Review]

January 2023

Contents

1. Introduction

1.1 Turley Sustainability has undertaken a review of the East Devon -Options Appraisal for a potential New Settlement (CBRE, 2022) ["Options Appraisal Report"], in respect of Zero Carbon and Climate Resilience matters. This review has been undertaken on behalf of Bloor Homes South West Ltd and Stuart Partners Ltd who share significant land control within the area identified as Options 1 within the Options Appraisal Report, and who have been promoting the "Denbow" New Community, which broadly accords with area assessed as Option 1. Within this review note these parties are referenced as the Consortium for ease.

1.2 These representations focus upon the sustainability/ net zero evidence base documents supporting the CBRE Options report and specifically the sections which address 'Net Zero Carbon' and 'Climate Resilience'. Both of the evidence to support these assessments are contained within the following document:

a. Appendix F: Zero Carbon Assessment. East Devon New Community Net Zero and Climate Risk. Review of Option Sites. Hydrock

1.3 The Consortium are pleased to provide their representations to the Council on the evidence base that guides and support the creation of an exemplar new settlement that fully supports the transition to a net zero development.

1.4 The Consortium fully support the Local Plans ambitions with respect to net zero and climate change and, as a demonstration of their commitment, have prepared a detailed 'Energy and Carbon Strategy' for the land currently being promoted, broadly within Option 1 and which the consortium refer to as Denbow.

2. Appendix F: Zero Carbon Assessment

2.1 Appendix F[1] of the Draft Local Plan contains the technical evidence (hereafter referred to as the Hydrock Report) that supports the assessment of two categories within the CBRE Report, namely Net Zero Carbon and Climate Resilience.

2.2 The Consortium fully support the Local Plans ambition to create an exemplar new community that meets the challenges of climate change and the locally declared climate emergency. The Energy and Carbon Strategy demonstrates:

a. The strengths of the site in terms of existing net zero infrastructure

b. The strategy deployed and to be further evaluated during detailed design to meet and where possible exceed emerging local policy.

2.3 With respect to the contribution of the three different options to Net Zero Carbon, Table 8 of the Hydrock Report summarises the performance of the three development options on the basis that Option 1 (Denbow) is considered the most suitable in terms of its contribution to net zero, closely followed by Option 3 and finally Option 2.

2.4 The Consortium fully support these conclusions however following a careful review of the Hydrock report and the additional evidence within the Denbow Energy and Carbon Strategy we believe that there is sufficient available evidence to increase the scoring for Option 1. Our justification for this is presented below in accordance with the three themes presented in Table 8 (below).

Table 8 - Contribution to Net Zero - scored assessment

Assessment Category	Option 1	Option 2	Option 3
Network Capacity (Generation)	2	2	2
Low or Zero Carbon Energy Technologies	5	2	4
Energy Storage	3	3	3
Overall (/15)	**10**	**7**	**9**

Source: Hydrock (2022)

Table 8: Network Capacity (Generation).

[1] Appendix F: Zero Carbon Assessment. East Devon New Community Net Zero and Climate Risk. Review of Option Sites. Hydrock

2.5 Section 3.3 of the Hydrock report presents the evidence to support the scoring for the first of the three sections of the 'Contribution to Net Zero Assessment'. This assessment has been reviewed resulting in the following comments:

a. It is noted that there is some export capacity at Clyst Honiston (7.04 MVA) and Pinhoe (10.51 MVA) both of which are in closet proximity to Option 1 located north-west of the site. There is also a primary substation located within Option 1 at Hill Barton which provided further infrastructure for energy transmission.

b. The Hill Barton EFW plant currently under construction and within Option 1 will export energy to the national grid and therefore undertake the necessary reinforcement works to the local energy network. This will provide further capacity and resilience to Option 1.

c. Options 1, 2 and 3 all score the same with respect to this theme however it is evident that Option 1 has the greatest network capacity infrastructure closest to the site with further significant works likely to occur as a result of the EFW plant at Hill Barton.

d. Option 3 is the furthest away from network capacity infrastructure which will result in the greatest connection costs relative to Options 1 and 2.

e. As a result of these factors the score for Network Capacity for both Option 1 and 2 should be increased to 4 (medium-high) and 3 (medium) respectively.

Low or Zero Carbon Energy Technologies

2.6 Section 3.4 of the Hydrock Report presents a range of Low or Zero Carbon Energy technologies most suitable for each Option and then ranks each option according to its potential contribution to this theme. This assessment has reviewed this information resulting in the following comments:

a. It is agreed that Option 1 should score the highest for this particular theme given the high potential for the development of a heat network using the waste heat from the EFW plant under construction at Hill Barton. This is a unique feature for Option 1 and (subject to detailed feasibility) presents a potential option for the delivery of exemplar net zero infrastructure which fully supports the local climate emergency and the draft Local Plan policies.

b. Table 5 of the Hydrock Report demonstrates the potential of each option to deploy ground mounted solar PV as an additional source of renewable energy generation. The consortium support this conclusion as demonstrated by Section 5 of the Denbow Energy strategy which confirms that, even at this early design stage, a potential area has been identified within Denbow (Option 1) for a c 4MW ground mounted Solar array.

Energy Storage

2.7 Section 3.5 of the Hydrock Report presents the options for the deployment of energy storage technologies within Options 1-3. This assessment has reviewed this information resulting in the following comments:

a. The Consortium fully support the deployment of energy storage technologies at Denbow and our initial thoughts and ambitions are presented within Section 5 of the Denbow Energy and Carbon Strategy. These include the creation of 'smart-grid' systems which utilise systems

such as household batteries, hot water tanks and Electric-Vehicle batteries to store and manage energy according to demand.

b. The EFW plant and its proposed heat network can also be used to store large quantities of heat energy within the pipes, releasing it to dwellings as necessary and without further expenditure of energy.

c. Given the unique potential for the creation of a heat network at Option 1, the consortium are fully supportive of the need to explore the creation of an Energy Services Company (ESCo) to deliver this system. As part of the feasibility study into the ESCo, the Consortium are happy to expand its brief to include incorporation of energy storage and demand technologies as well as the creation of a smart grid. This commitment would strongly support the recommendations within paragraphs 3.5.7 -3.5.10 of the Hydrock Report.

d. As a result of the above features, the score for Option 1, in respect of Energy Storage, should be increased to 4 (medium/ high potential).

Summary of the Net Zero Review

2.8 Following the review of the Hydrock report, the Consortium believe that the following increases to the scores for Option 1 are justified:

a. The score for Network Capacity for both Option 1 and 2 should be increased to 4 (medium-high) and 3 (medium) respectively.

b. The score for Option 1 in respect of Energy Storage should be increased to 4 (medium/ high potential).

2.9 Collectively this would increase the total sores as follows:

a. Option 1 would increase to 13, Options 2 to 8 and Option 3 would remain at 9.

3. Appendix F: Zero Carbon Assessment. Climate Resilience

3.1 Section 4 of the Hydrock report addresses the issue of climate resilience and how each New Settlement Options could perform against this theme.

3.2 The Consortium have reviewed this section of the Hydrock report and broadly agree with all of the conclusions (except in respect of soil erosion) which results in both Option 1 and Option 3 being awarded a score of 19.

3.3 The Consortium do not agree however with the conclusions of the assessment for Soil Erosion (water) as set out in Paragraphs 4.4.14-4.4.16. This assessment states that Option 1 has the highest risk of soil erosion from water run-off which will increase as a result of climate change. It is important to recognise however that should any Option be subject to development then the quantum of bare soil will be reduced significantly either as a result of development or green and blue infrastructure. The Consortium believe that a score of 3 should be applied to each development option.

3.4 With this amendment to the Soil Erosion (Water) category then the total scores for the three Options under the Climate Resilience theme would be:

a. Option 1 – 20

b. Option 2 – 24

c. Option 3 – 17

4. Summary of the Review of Appendix F

4.1 Ensuring that the New Settlement to the East of Devon meets the net zero policy of the Local Plan and the local climate emergency is a key objective. Appendix F demonstrates that all three development options can make a strong contribution to net zero.

4.2 Prior to this review, the Hydrock Report identified that Option 1 had the potential to make the strongest contribution to Net Zero following by Option 3 and then 2. Option 2 was identified as making the strongest contribution to Climate Resilience following by both Option 1 and 3.

4.3 The Consortium have reviewed the assessment within Appendix F and make the following comments:

4.4 The Denbow Energy and Carbon Strategy provides detailed evidence of the commitment of the Consortium to creating an exemplar energy strategy. This document clearly supports the conclusion that Option 1 has the most significant potential to utilise its assets (energy generating plant) to create a decentralised energy network which could make a very strong local and regional contribution to net zero.

4.5 Using this evidence, the Consortium believe that the Net Zero scores should be amended to:

a. Option 1 would increase to 13;

b. Option 2 would increase to 8; and

c. Option 3 would remain at 9

4.6 With respect to the assessment of Climate Resilience the Consortium believe that there are justified amendments to the Soil Erosion (Water) category which would change the total scores to:

a. Option 1 would increase to 20;

b. Option 2 would increase to 24; and

c. Option 3 would decrease to 17.

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