A response to the Bedford Borough Council
Local Plan 2040 – Draft Plan Strategy Options and Draft Policies Consultation by

TAYLOR WIMPEY UK LIMITED

In respect of

Denybrook Garden Community, West of Wyboston

Local Plan Representations

September 2021

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1 Introduction

1.1 Bedford Borough Council (the " Council") has an adopted Local Plan that makes provision for growth to 2030, but is consulting upon an update to its Local Plan for the period to 2040 to reflect the emerging national policies for the Oxford to Cambridge Arc. The Council is aiming to submit the plan to government for examination by January 2023.

1.2 Taylor Wimpey UK Limited responded the Council's 'Call for Sites' accordingly submitting a proposal for a residential-led mixed-use development of in the region of 10,000 dwellings.

1.3 An exemplar sustainable settlement is proposed that will include a high-quality movement and mobility strategy that will, in conjunction with the development and juxtaposition of complimentary land-uses, minimise the need for vehicle trips beyond the local community. A residential-led mixed-use development including primary and secondary education, local retail and community centres, sports and recreational land uses will be complimented by employment development (possibly in the technology sector) as well as local community hubs for remote working and a concierge type service to manage deliveries etc. The development would promote car club type services, reducing levels of car ownership. Bringing this together, over time, will minimise the external impact of the development, reducing the need for off-site highway infrastructure that can increase vehicle trips.

1.4 The advancement of the East West Rail route between Bedford and Cambridge, will bring high-quality rail services close to the development although the preferred alignment is not yet known. The likely promotion of active travel modes will provide genuine opportunities for sustainable, linked trips to be made to destinations such as Cambridge, Bedford, Milton Keynes and beyond.

1.5 A high-quality Travel Plan will cover many aspects of the need to travel as part of the daily life at Denybrook Garden Community. Vouchers for season ticket travel, family travel cards and vouchers for the purchase of electric bikes are amongst the measures being considered. Together with services to manage a support of online shopping and deliveries, these initiatives will promote a genuinely sustainable community.

1.6 These representation comment upon the proposed development strategy outlined in the Local Plan from a transport perspective and present the principles of the mobility strategy that will support an allocation of land for development at Denybrook Garden Community. The representations refer to, as is appropriate, the findings of the Bedford Borough Transport Model: 'New Settlement West of Wyboston' report that assesses the forecast impact of a prospective settlement west of Wyboston and an assessment undertaken of highway capacity, undertaken on behalf of Taylor Wimpey, that not only supports the suggested allocation options contained in the Council's strategy for development, but also suggest that a larger scale allocation is both feasible and deliverable, providing a more cohesive and connected development than is achievable through the allocation of other sites.

1.7 The fundamental guiding principle of the Denybrook Garden Community west of Wyboston will be to define a clear road user hierarchy, in which pedestrians and cyclists are given the highest priority and internalised private car users the lowest to deliver a genuinely sustainable development.

1.8 To support this the development will:

- Prioritise walking and cycling within the settlement with full permeability of movement by these modes;
- Enhance and support public transport including travel by bus and rail for longer journey distances, ensuring high quality interchanges are available to ensure ease of interchange between walking and cycling with public transport;
- Afford the least priority to single occupancy private vehicle travel with constrained permeability, whilst recognising the use of the car may still be an essential travel mode for users.

1.9 The Transport for London: "Improving Walkability: Good practice guidance on improving pedestrian conditions as part of development opportunities" defined the five 'Cs' of good walking networks as:

1. **Connected**: Walking routes should connect all areas with key "attractors" such as public transport stops, schools, work and leisure destinations. Routes should connect locally and at district level, forming a comprehensive network.
2. **Convivial**: Walking routes and public spaces should be pleasant to use and allow walkers and other road users to interact. They should be safe, inviting and enlivened by diverse activities. Ground floors of buildings should be continuously interesting.
3. **Conspicuous**: Routes should be clear and legible, if necessary, with the help of signposting and waymarking. Street names and property numbers should be comprehensively provided.
4. **Comfortable**: Comfortable walking requires high-quality pavements, attractive landscapes and buildings and as much freedom as possible from the noise, fumes and harassment of vehicles. Opportunities for rest and shelter should be provided.
5. **Convenient**: Routes should be direct and designed for the convenience of those on foot, not those in vehicles. This should apply to all users, including those whose mobility is impaired. Road crossings should be provided as of right and on desire lines.

1.10 These principles will be placed at the heart of the development of a high-quality pedestrian mobility strategy for the development of the Denybrook Garden Community that would be enshrined within a design-code that would be agreed with the Council as part of future planning applications.

Structure of these Representations

1.11 Section 2 provides a commentary on the emerging Local Plan 2040 – Draft Plan Strategy Options and Draft Policy documents supporting the development strategy and concluding that land west of Wyboston should be allocated as the new settlement option for growth along the East-West Rail corridor and eastern parishes.

1.12 Section 3 presents an overview and summary of a mobility strategy that will be developed and agreed with the Council whilst Section 4 considers principal means of access to the site.

1.13 Section 5 provides a commentary on the findings of the Council consultants assessment of the Local Plan development strategy within submitted documentation that forms part of the evidence base to 2040 and further presents the results of local junction analysis undertaken by TPA.

1.14 The conclusions of these representations are presented within Section 6.

2 Local Plan 2040 – Draft Plan Strategy Options and Draft Policy

2.1 To achieve the Vision and Objectives of the development strategy and inform draft policy, the emerging Local Plan contains four specific themes, which seek to deliver greener, more accessible development, improve prosperity and provide better places.

2.2 The allocation of land west of Wyboston for a new settlement will help the Council to achieve the objective of making Bedford a net zero carbon borough. A new settlement will deliver significant new green-infrastructure, facilitating access to existing rural routes and connections to the countryside. The development will introduce inclusive places accessible to the local communities offering the opportunity for healthier lifestyles for all.

2.3 The second main theme of the Local Plan seeks to encourage sustainable travel and the identification of development options along the A421 corridor with the rail-based growth parishes, clearly supporting the principles of sustainable travel. Option 2b, 2c and 2d support the provision of improved connectivity to the East -West Rail line and land west of Wyboston will support high-quality connected routes to the East-West Rail corridor, whilst promoting walking and cycling through a network of new facilities, providing active travel routes to locations such as Colmworth Business Park and other areas in the Borough. The provision of dedicated 'car-free' active travel routes will be complimented by good-quality public transport services, linking transport infrastructure, employment areas and shopping centres.

2.4 Good-quality, mixed-use development can deliver attractive places to work, allowing new business to grow. The allocation of a new settlement west of Wyboston has the scale to attract significant investment and growth, supporting the third Theme of the Council's vision and objectives to support a stronger local economy.

2.5 Land to the west of Wyboston is not severed by existing, established transport infrastructure, such as local road corridors, existing and proposed rail lines that prevent the delivery of connected, cohesive and comprehensive development to be delivered. The land west of Wyboston is of a suitable scale, to deliver a high-quality and inclusive development that will accommodate the everyday needs of residents, adopting the principles of 15-minute neighbourhoods.

2.6 The Local Plan 'Development Strategy Topic Paper' identified concern pursuant to the quantum of housing that can be delivered at Little Barford due to the land being affected by four out of five of the routes being considered through consultation. The topic paper raised this 'weakness' in respect of option 2b and 2c, however, it applies equally to option 2d. It should be noted that such a 'weakness' does not affect land at Wyboston, as preferred alignment option 1, passes to the immediate south of

the promotion land. Greater certainty can be afforded to the quantum of development deliverable west of Wyboston.

2.7 The land at Wyboston provides the only meaningful opportunity in the Local Plan strategy options 2b, 2c or 2d to deliver a new settlement type development, that can genuinely meet the everyday needs of residents, with the scale to provide all-through school years provision, local sports and recreational facilities, high-quality employment opportunities and local shops and associated services and for these reasons should be allocated in the plan going forwards.

2.8 The assessment presented in these representations demonstrates that the land can be allocated for a larger scale of development than 2500 homes (up to 2040) and is supported by the evidence base analysis provided in the Bedford Borough Traffic Model: New Settlement West of Wyboston report that has examined the off-site highway impact of more than 5000 homes up to 2040. Taylor Wimpey UK Limited propose that the proposed allocation of land west of Wyboston should be increased to 4000 dwellings, as supported by the representations.

2.9 These representations demonstrate that an exemplar mobility strategy creating high-quality pedestrian and cycle routes that provide connectivity to local employment areas can be delivered. Further, through the promotion of a high-quality street hierarchy, consistent and connected shared-use footways and cycle tracks will ensure that residents will be able to take advantage of a series of convenient routes to local services and amenities within short journey times, reducing the need for local car trips.

2.10 The provision of high-quality, frequent bus services connecting residents to the proposed new East-West Rail station, the diversion of existing services (as appropriate) and the provision of new potential bus services will provide a bus within 400m of proposed dwellings, with an aspirational frequency of one bus every 15-20 minutes.

Summary

2.11 These representations demonstrate that land to the west of Wyboston should be allocated in the proposed Local Plan (2040) and present a summary of a Mobility Strategy that will form an integral part of the sustainable mobility strategy for the development in transport terms. The approach to access is presented, demonstrating that suitable highway corridors can be introduced to accommodate the demand for movement to and from the development.

3 Mobility Strategy

Introduction

3.1 This section of the representations set out a summary of the strategy for how travel within, to and from the site will be undertaken by all modes, establishing the key principles that will guide and direct a strategy for mobility that will encourage and enhance sustainable travel for the future users of the new settlement.

3.2 Whilst the strategies for pedestrians and cyclists are set out separately, they are intrinsically linked through the delivery of shared-use cycling and walking facilities.

Pedestrian

3.3 A key overarching principle of the Denbrook Garden Community will be to ensure a pedestrian friendly environment whereby key facilities and services are accessible within reasonable walking distances. Therefore, a key premise of the development will be to establish a principle of a 15-minute neighbourhood, a neighbourhood in which immediate and key facilities should be able to be accessed within a 15-minute walk from the residents' homes.

3.4 This 15-minute neighbourhood principle will ensure that future residents of Denybrook Garden Community will be able to walk to key amenities such as:

- public transport infrastructure;
- schools;
- sports, leisure and recreational amenities;
- shopping; and
- employment centres.

3.5 To ensure that this is achievable, the development will follow guidelines and standards set out nationally and regionally to ensure the development of the settlement is conducive to travel by foot. The development of the settlement will utilise following non-exhaustive guidance documents to aid the development of the Denybrook Garden Community:

- Manual for Streets – Department for Transport's (DfT);
- Manual for Street 2 – DfT;
- Providing for Journeys on foot – Institute for Highways and Transportation;
- Pedestrian related Local Transport Notes (LTN) such as LTN 3/08 and LTN 2/09 – DfT;
- Walking and cycling infrastructure design guidance – Sustrans;
- Designing for Walking – Chartered Institute for Highways and Transportation; and
- Designing for Pedestrian – Institution of Civil Engineers.

3.6 To support the establishment of the appropriate street hierarchy from the inception of the development, initial street hierarchy sketches have been undertaken to define the likely carriageway widths alongside the indicative pedestrian / cyclist corridors that could include landscaped verges to ensure appropriate separation from the carriageway.

3.7 To compliment the provision for pedestrians alongside the vehicle corridors, fully segregated pedestrian / cyclist routes are proposed to be implemented to ensure that direct corridors of travel between trip origins and destinations, forming a green wheel type of infrastructure similar to that as currently provided with the Bedford Green Wheel, providing not only an external circular route but also the corresponding 'spokes' into and out from the respective core proposed facilities and amenities.

3.8 As part of the initial work that has been undertaken to support the development, travel on foot will be largely contained within the site itself through the provision of on-site facilities and amenities. However, should external journeys by pedestrians occur, key routes will likely be to the northeast towards Eaton Socon and St Neots with further journeys likely to be made to the south, towards the Roxton and potential leisure walks around the River Great Ouse. Currently routes to these directions are provided through footways near the existing highway network or a series of public footpaths which have limited formal surface and signage. Key routes to the south are likely to be provided via Footpath A11, A10, 44, 9 and 7 and journeys to the east provided by Footpath 8 and 37.

3.9 A programme of enhancement to these routes will enable the delivery of a desirable and inclusive network for pedestrian movements. An indicative plan highlighting the potential enhancements to the Public Right of Way network is presented within **Figure 1**.

3.10 Further journeys to the east will be enhanced, connecting into the existing settlements of Wyboston and Chawston towards the A1 via The Lane and via Chawston Lane where an existing pedestrian bridge is provided that enables access eastward to the Begwary Brook.

3.11 Throughout the development a series of connected pedestrian corridors will provide the appropriate level of priority to pedestrians, which will additionally connect to external end destinations.

Cyclists

3.12 Intrinsically linked with the pedestrian provision, the key driver behind a strategy for cyclists will be to ensure that journeys within as well as to and from the site by cycle are able to be completed within a reasonable cycling distance, with a travel time of approximately 12 to 20 minutes to access key amenities and infrastructure.

3.13 To ensure that this is achievable, a masterplan for the development will follow guidelines and standards set out nationally and regionally to ensure the environment is conducive to travel by foot. The local highway and transport infrastructure throughout the Denybrook Garden Community will be founded upon advice contained in such guidance as:

- Manual for Streets – Department for Transport's (DfT);
- Manual for Street 2 – DfT;
- Cyclist related Local Transport Notes (LTN) such as LTN 1/20 and LTN 3/08 – DfT; and
- Walking and cycling infrastructure design guidance – Sustrans.

3.14 Consistent with the walking strategy, journeys by cycle will ensure that future residents are able to access wider key infrastructure such as public transport interchanges, leisure facilities and further employment locations within broadly a 5 kilometre cycle ride based on an average cycling speed of between 12mph and 16mph, accounting for a range in cyclist capabilities.

3.15 To support journeys off-site, key connections will need to be delivered towards the east to ensure that a connected and cohesive route is provides between Denybrook Garden Community and the surrounding areas such as Colmworth Business Park and Little Barford Business Park.

3.16 To the east of the site, a number of existing footpaths, such as Public Footpath Number 8 and Number 35 provide connections towards the A1 and an underpass beneath the A1. Existing public Footpaths will be upgraded to a Bridleways to ensure that the routes are suitable for cycling and use by equestrians, in addition to pedestrians. This is consistent with aspirations of the Council to provide more multi-user routes.

Public Transport

Bus

3.17 Direct public transport provision into the site is currently limited to a single service, which operates on a Thursday only. However, to the east of the settlement, a number of existing services operate along the A1 forming routes between St Neots and Bedford with a key interchange between these services along the A1 being at the Wyboston Footbridge with bus stops on both sides of the A1. Table 3.1 provides a summary of the bus services that operate within the vicinity of the site.

Table 3.1 Summary of local Bus Services and Frequencies

Service number	Approximate main time frequency		
	Monday to Friday	Saturday	Sunday
29	Thursday only – one service in either direction		
61 / 61X	Hourly service	Hourly service	No service
63	2 services daily	No service	No service
66	Hourly service	Hourly service	No service
112	Thursday only – one service in either direction		
905	Half hourly service	Half hourly service	Hourly service
W9	2nd Thursday of every month – one Service in either direction		
W10	2nd Thursday of every month – one Service in either direction		

3.18 To ensure an appropriate level of usage of public transport from the inception of the development, early provision of public transport to the site will be critical. Initial discussions have identified that the extensions to existing services through the site would be likely to be supported alongside provision of new services to support sustainable travel.

3.19 Initial public transport connectivity to the site would likely be achieved through a diversion / extension of the existing 905 service between Bedford and Cambridge, via St Neots. This could then be supported through the introduction of a new service that could provide a direct connection to the new railway interchange with East-West Rail as well as providing access to local facilities, services and employment land uses within St Neots such as the Colmworth Business Park, St Neots town centre and the Little Barford industrial estates. To ensure that the service is attractive for multimodal journeys, the time-tabling of a new bus service will be planned to coincide with the East-West Rail services and the East Coast Main Line. An indicative vision of the proposed changes to bus routes to serve Denybrook Garden Community is presented in **Figure 2**.

3.20 The wider public transport strategy will provide public transport routes, with bus priority at key points, along the primary and secondary street network deliver good accessibility to public transport for future residents. Walking distances to bus services will be no more than 400m in accordance with accepted good practice. Demand responsive services will also be considered as a means to delivering a genuinely accessible and sustainable community for residents of Denybrook Garden Community.

3.21 To enhance the usage of bus services, bus stops should form high quality, attractive waiting environments, with real time passenger information, shelters, accessible boarding and cycle parking where appropriate.

3.22 The overall objective will be to deliver as a minimum a 20 minute bus service frequency, however, demand responsive services will enhance this further to create an accessible and inclusive development..

Rail

3.23 Currently, the nearest railway station to the proposed development would be the St Neots Railway Station, located on the eastern side of St Neots, approximately 7km, in a straight line, (or 8.9km via currently available routes) to the north east of the site.

3.24 Route 1, one of the preferred East-West Rail corridors, is located to the south of Coleden Road, close to the Denybrook Garden Community and a new station / interchange is planned to provide integration with the East Coast Main Line, to the east of the A1. It is expected that an 'active-travel' corridor will be introduced as part of the East-West Rail route and improved pedestrian and cycle links to such a corridor will form part of the mobility strategy for Denybrook Garden Community, delivering 'traffic-free' access to a new station interchange. The bus strategy has presented the principles of delivering a new service to enhance access to the existing and proposed rail services, providing a comprehensive strategy for the movement and management of resident's travel demands.

3.25 A new station is likely to be approximately 5km from Denybrook Garden Community which it within an acceptable cycling distance, which based upon a cycling speed of between 12mph and 16mph would result in an anticipated journey time of between 12 and 20 minutes to the new station.

Further discussions – East-West Rail (EWR)

3.26 One of the main objectives of East West Rail is to stimulate economic growth, housing and employment through the provision of new, reliable and attractive interurban passenger train services in the Oxford – Milton Keynes – Cambridge corridor. The East-West Rail consultation documentation sugegsted that the new line would support local aspirations to create more jobs and provide more homes along the route.

3.27 Based on the information presented within the most recent EWR consultation, five route alignment options are being considered with Route Alignment 1 and Route Alignment 9 identified as 'emerging preferences'.

3.28 'Preferred' Route Alignment 1 is located closest to Denybrook Garden Community. East West Rail is likely to embrace other, active modes of travel in the delivery of its infrastructure and the provision of walking and cycling facilities alongside the railway would encourage sustainable linked trips between the Denybrook Garden Community and the proposed St Neots South – Option A station.

3.29 This sustainable, active travel corridor would provide crossings of the A1 and the River Ouse and would link to Denybrook Garden Community by improvements to existing public rights of way, in particular Public Footpath 7, 8, 10 and 11.

3.30 When considering the wider policy of the Oxford-Cambridge Arc, as set out within the Arc Spatial Framework (February 2021), the provision of the northern alignment close to Denybrook Garden Community would further enhance the delivery of the sustainable transport infrastructure to support the site in the delivery of housing development in accordance with the framework's objectives.

Site Wide Travel Plan

3.31 A high-quality Travel Plan will cover many aspects of the need to travel as part of the daily life at Denybrook Garden Community. Vouchers for season ticket travel, family travel cards and vouchers for the purchase of electric bikes are amongst the measures being considered. Together with services to manage a support of online shopping and deliveries, these initiatives will promote a genuinely sustainable community.

3.32 To support the site-wide Travel Plan, a personalised travel planning could be offered to the future residents to support the residents in making sustainable travel choices.

On-site facilities

3.33 A residential-led mixed-use development including primary and secondary education, local retail and community centres, sports and recreational land uses will be complimented by employment development (possibly in the technology sector) as well as local community hubs for remote working and a concierge type service to manage deliveries etc. The development will deliver access to car club type services reducing levels of car ownership. Bringing this together, over time, will minimise the external impact of the development, reducing the need for off-site highway infrastructure that can encourage car travel.

4 Vehicular Access Strategy

4.1 Roxton Road will be widened to provide a 7.3m wide carriageway to serve the first phase of development of up to 4000 homes in the Local Plan period to 2040. To the north of Chawston Lane, where the existing carriageway has a left-hand bend at the access to the existing fishing lakes, the proposed access will extend northwards, forming a 'causeway' type entrance to the development, before re-joining the existing alignment of Roxton Road, to the south of the Roxton Road / The Lane junction. The proposed highway improvements are illustrated in the TPA drawing (number 2002-007/SK13) that comprises **Appendix A**to these representations.

4.2 In addition, Colesden Road will be widened to 6.25m to provide for a secondary, southern exit from the development complimented by a shared use footway / cycle track along a section on the northern side to provide access to public Footpaths No. A11 and A10, part of the local Public Right of Way (PRoW) network. A priority (T-junction) is proposed with Coleden Road will provide access to the proposed Denybrook Garden Community. The proposed access arrangements and improvements to Colesden Road are presented in the TPA drawing (number 2002-007 SK14) contained in **Appendix B**.

4.3 As part of the proposals being developed by Highways England (now National Highways), a new 'local-road' will be constructed to provide for movements between The Lane, Chawston Lane and via a further new section of carriageway, Chawston Lane and Roxton Road. Whilst not forming part of the definitive access strategy for the allocation of the land west of Wyboston, via The Lane, Chawston Lane and the new sections of carriageway, access to or from the south could be achieved. The infrastructure to be provided by National Highways will include a shared-use footway / cycle track facility that will be accessible from the development through the network of internal footways and cycle routes.

4.4 Routes to the north will be accommodated along Staploe Road and Bushmead Road, with carriageway widening to increase the width of Bushmead Road to 7.3m through the future phases of the development beyond the period covered by the emerging Local Plan. The improvements proposed along Bushmead Road are illustrated in the TPA drawing (number 2002-007 SK17) contained in **Appendix C**.

4.5 The access strategy and summary of the proposed public transport strategy is presented within **Figure 3**.

4.6 The transport evidence report prepared by the Borough Council's consultants, AECOM 'Bedford Borough Transport Model: *New Settlement West of Wyboston*' demonstrates that the junctions on the local highway network have adequate capacity to accommodate the traffic associated with the allocation contained in the Local Plan development strategy options, 2b, 2c and 2d. A further 'Scenario B' assessment in the AECOM transport evidence examines the impact of 5,150 dwellings within the

Local Plan period (2040) which demonstrates that sufficient capacity exists on the local highway network.

4.7 Taylor Wimpey is proposing that the Local Plan (2040) allocation includes for up to 4000 dwellings delivering a comprehensive, cohesive and connected Denybrook Garden Community.

4.8 An assessment of the findings of the Borough Council's consultant's examination of the Denybrook Garden Community along with an analysis undertaken by TPA is presented in the following chapter of these representations.

5 Bedford Borough Transport Model

Context

5.1 To support the preparation of the Local Plan to 2040 the Council has appointed AECOM to examine the transport impacts and transport infrastructure requirements arising from the development scenarios consulted upon in Option 2a, 2b, 2c and 2d of the Borough Council's development strategy.

5.2 The Borough Council has adoption 'Option 2' as its preferred strategy for development to 2040 and within Option 2 there are four land allocation and development strategies and AECOM has examined the transport, traffic and infrastructure requirements of each scenario.

5.3 Specific to the promotion of the Denybrook Garden Community by Taylor Wimpey Strategic Land, the transport evidence bases of the Borough Council related to this specific allocation is presented in AECOM's examination of the Bedford Borough Traffic Model entitled *'New Settlement West of Wyboston'*.

5.4 The key findings of the transport evidence support the allocation of the land west of Wyboston in the Local Plan, but also demonstrate that a development of around 5000 homes would be deliverable, without significant impact upon the local highway network.

5.5 The AECOM analysis identifies a series of transport infrastructure improvements defined by the Borough Council to support the development strategy of the Local Plan and these are set out in Table 2.4 of the 'New Settlement west of Wyboston' report, but are reproduced in Table 5.1.

Table 5.1 Mitigation Measures Defined by the Borough Council

Mitigation Measure	Description
A421 Junction	New A421 Junction to the north of Great Barford
A421 / Renhold Junction	Realignment of eastbound off-slip at junction
Western Bypass	Dualling of western bypass between A421 and A6
A421 / Frank Branston Way	New segregated left-turn link from A421 eastbound off-slip to Frank Branston Way
Great Ouse Flyover	New free-flow link between the A6 southbound and the western bypass
Milton Ernest Bypass	New easterly bypass for the A6 of Milton Ernest
A6-A1 Link	Improvements to the route from the A6 to Eaton Socon through Thurleigh and Bolnhurst
Broadmead Station	New rail station at Broadmead to replace the existing stations at Kempston Hardwick and Stewartby
Bedford North Station	New rail station to the north of Bedford on the proposed East-West Rail route
Colworth Station	New rail station near the proposed development at Colworth
Cycle Superhighway (St Neots)	New, high-quality cycleway between St Neots and Bedford

Information taken from Table 2.4 of 'New Settlement West of Wyboston' report.

5.6 The assessment of the impacts arising from the development strategy preferred by the Council include the effect of Bedford Town Active Measures, that include a 9% reduction in car commuting trips, a 5% reduction in car education trips, and a 4% reduction in car trips for all other trip purposes.

5.7 The effect on transport mode choice arising from the introduction of the East-West Rail connection between Bedford and Cambridge is further included in the Borough Council strategic model. The with-mitigation scenario test in the Borough Council strategic model, includes a series of allocation specific infrastructure improvements attributable to the land west of Wyboston and these are contained in Table 2.6 of the AECOM report, but are reproduced in these representations at Table 5.2.

Table 5.2 Proposed Additional Mitigation Measures Defined by AECOM

Mitigation Measure	Description	Year [1]
A1 / A421 / A428 Black Cat Junction	Minor junction improvements including an additional 30m left-hand flare on the A1 southbound off-slip, the extension of the flare by 20m on the Bedford Road approach and alterations to the assumed lane markings to improve key movement of A1 southbound to A421 westbound	2050
Bedford Road / Roxton Road	New roundabout (single lane with flared approaches) to replace the existing priority junction	2040-2050[2]
Thurleigh Road / Mill Hill	Junction improvements including a new filter lane for right turn onto Mill Hill and the extension of the Mill Hill flare to 20m	2040-2050[2]
Brickhill Drive / Linnet Way	Conversion of existing mini-roundabout to a signalised junction *(Consideration of traffic calming measures along Linnet Way recommended but not modelled in this assessment)*	2040
A421 / Water End / St Neots Road / Green End	Alterations to the assumed lane markings to provide two lanes of traffic through the junction from south-westbound off-slip to St Neots Road exit towards Bedford, including addition of short two-lane section on St Neots Road exit from junction *[Additional to BBC mitigation scheme at this location]*	2040
Rerouteing of the existing 905 service	Reroute 905 Bedford-Cambridge coach through development site, exiting A421 at new interchange and enter St Neots via Bushmead Road to resume current route	2040
New bus service to proposed East-West Rail Station at Tempsford	New bus service serving the proposed development and the interchange station at Tempsford between the East Coast Mainline and the new East-West Rail route	2040

1 – year of requirement of mitigation. 2 - The timing of these proposed mitigation measure depends on the phasing of the development. The modelling suggests that these measures may be required in 2040 Scenario B (representing 5,150 dwellings) but are not required in 2040 Scenario A (representing 2,500 dwellings)

Modelling Scenarios

5.8 Council modelling has undertaken a number of development assessment scenarios. These are highlighted below

- **Denybrook Modelling**
  - *2040 "Without" Mitigation Scenarios* – Two forecast scenarios considering different assumed levels of growth at Denybrook by 2040:

  - Scenario A: 2,500 dwellings at Denybrook; and
  - Scenario B: 5,150 dwellings at Denybrook.
- *2040 "With" Mitigation Scenarios* – Two forecast scenarios have been modelled which incrementally add the proposed mitigation measures to the corresponding "without" mitigation scenarios.
- *2050 "Without" Mitigation Scenario* – One forecast scenario considering the maximum proposed settlement size of 10,150 dwellings.
- *2050 "With" Mitigation Scenario* – One forecast scenario has been modelled which incrementally adds the proposed mitigation measures to the corresponding "without" mitigation scenario.

Results

5.9 The modelling produced provides a comparison of the scenarios identified above against the 2018 base year modelling and the 2030 reference case for the AM peak hour (08:00 to 09:00) and PM peak hour (17:00 to 18:00) with the outputs including:

- High level network statistics of forecast traffic and average network speeds;
- Link analysis showing forecast routing and highway demand;
- Highway traffic volume changes between scenarios; and
- Forecast change in junction delays and volume-capacity ratios in the vicinity of the proposed development sites.

5.10 In summary, it is highlighted within the AECOM report's conclusions that:

> *"With the inclusion of the proposed mitigation measures, across the selected junctions at key locations in the vicinity of the proposed development no location is forecast to experience a delay greater than 21 seconds or a volume-capacity ratio above 67% in the AM Peak or PM Peak hour. Whilst the assumptions adopted in this assessment for the amount of traffic forecast to be generated by the proposed development may be considered to be lower than would be assumed as part of a Transport Assessment of the proposed development, this analysis of key junctions suggests that there is remaining capacity at these locations which could accommodate some or all of an increase in traffic which may be generated with a higher assumed trip rate for the proposed development."*

5.11 This highlights that the modelling work undertaken would support the delivery of a significant development at the proposed settlement. However, given that this would be unreasonable to be able to be delivered within the emerging Local Plan period, the lesser development scales have been assessed and also demonstrated to not result unacceptable conditions.

Summary

5.12 Whilst the Borough Council's assessment undertaken by AECOM considers the wider strategic impact of development west of Wyboston, the capacity of local junctions along the Roxton Road corridor has been undertaken, using the Junctions 9 Software suite. A number of allocation scenarios have been tested that support the Borough Council development strategy but also demonstrate that a greater quantum of housing west of Wyboston could be delivered within the Local Plan period to 2040.

5.13 The Borough Council evidence base includes the provision of a new junction onto the A421 however, in a 'without-mitigation' scenario test, for an allocation of 5150 dwellings west of Wyboston, the modelling suggests that such an allocation would not have a detrimental impact on the operation of the local highway network. This is further supported by the analysis by TPA in the following section of these representations.

5.14 It is understood further, that National Highways (formerly Highways England) has commenced its examination of its Road Investment Strategy 3 (RIS 3) program for the period 2025/26 to 2030/31 and have advised the Council that development of c.10000 homes is the type of scale of development that would be required for an access to the strategic network to be considered.

5.15 The allocation of the land west of Wyboston for up to 4000 homes would not facilitate the need for a new junction onto the A421, as demonstrated by the Borough Council's modelling, but future Local Plan reviews might identify further development in this area and as such a junction might be included in the RIS3 program at that time.

Local Junction Capacity Assessment

5.16 To support the conclusions contained in the Bedford Borough Transport Model TPA has undertaken additional standalone modelling to demonstrate that access to the development, with principle access along Roxton Road would be deliverable and acceptable in terms of both highway design and in capacity performance.

5.17 To forecast the likely travel demand that would arise from the allocation of land west of Wyboston an assessment as to the likely population of the allocation has been undertaken using the 2011 Census information for household size has been obtained for the following Mid-Layer Super Output Areas (SOA):

- Huntingdonshire 019;
- Huntingdonshire 020;
- Huntingdonshire 021;
- Huntingdonshire 022; and

- South Cambridgeshire 020.

5.18 The four Huntingdonshire areas represent the built-up area of St Neots and the South Cambridgeshire 020 area represents the built up area of Cambourne.

5.19 Given the location of the proposed development and its proximity to the A421 and the A428, the existing travel characteristics of St Neots are felt to represent a reasonable proxy for the likely travel behaviour of the future residents.

5.20 The National Travel Survey (NTS) collects data on travel modal share, journey purpose, time of travel and average number of trips amongst other travel related information.

5.21 Combining the data presented within NTS Tables NTS0502 and NTS0503 would enable the number of journeys that would occur during the morning and evening peak hours to be identified based on their journey purpose.

Capacity Analysis

5.22 The TRL software programme Junctions 9 has been used to assess the performance of the roundabouts. The traffic flow information is translated into vehicles in the model with a corresponding proportion of HGVs. Junctions 9 calculates queues and delays and the critical outputs are the Ratio of Flow to Capacity (RFC) and maximum queue predicted for each arm.

5.23 Typically for the purposes of capacity analysis, an arm, link or lane of a junction is identified to be operating within capacity when the model forecasts a DoS of less than 100% or an RFC value of less than 1.

5.24 A junction is considered to be operating within normal free flow conditions / theoretical capacity when the arm, link or lanes of a junction are operating with a DoS of less than 90% or a maximum RFC value of less than 0.85.

Roxton Road Roundabout with Bedford Road

5.25 The junction has been modelled in accordance with the Local Plan period under the loading of a development of 5,150 dwellings (consistent with the Scenario B assessment in the Borough Council evidence base) and for up to 10000 dwellings.

Table 5.3 Roxton Road Roundabout with Bedford Road – 2040 Modelling Summary

Scenario	Approach	Morning peak		Evening Peal	
		RFC	Queue	RFC	Queue
5,150 dwellings	Bedford Road (W)	0.18	0	0.42	1
	Roxton Road	0.19	0	0.10	0
	Bedford Road (E)	0.15	0	0.48	1
Up to 10,000 dwellings	Bedford Road (W)	0.19	0	0.56	1
	Roxton Road	0.25	0	0.13	0
	Bedford Road (E)	0.25	0	0.83	5

5.26 As can be seen from the modelling results presented within Table 5.3, the junction is anticipated to be operating within capacity on all approaches during the morning and evening peak periods with limited queueing anticipated.

Roxton Road Roundabout with Chawston Lane Link Road

5.27 As part of the current A428 Caxton to Black Cat proposals, a new roundabout junction is proposed on Roxton Road, providing a new link between Roxton Road, Chawston Lane and The Lane. This new link road is proposed to facilitate the closure of the existing priority junctions of Chawston Lane and The Lane with the A1.

Table 5.4 Roxton Road Roundabout with Chawston Lane Link Road – 2040 Modelling Summary

Scenario	Approach	Morning peak		Evening Peal	
		RFC	Queue	RFC	Queue
5,150 dwellings	Roxton Road (N)	0.64	2	0.23	0
	Link Road	0.09	0	0.16	0
	Roxton Road (S)	0.20	0	0.44	1
Up to 10,000 dwellings	Roxton Road (N)	0.94	10	0.34	1
	Link Road	0.12	0	0.18	0
	Roxton Road (S)	0.26	0	0.67	2

5.28 As can be seen, under the loading of the 5,150 development traffic flows, the junction is anticipated to operate within capacity during the morning and evening peak with minimal queues. Under the loading of the traffic flows associated with a development of up to 10,000 dwellings, the junction is anticipated to operate within capacity.

5.29 During the morning peak period the Roxton Road (north) approach to the junction is identified to operate with an RFC of 0.94 with a corresponding queue of 10 vehicles.

5.30 Further analysis has been undertaken to understand the potential operation under the influence of an even distribution of the proposed development traffic across the peak hours and this analysis is presented within Table 5.5.

Table 5.5 Roxton Road Roundabout with Chawston Lane Link Road – Flat Development Profile Modelling Summary

Approach	Morning peak		Evening Peal	
	RFC	Queue	RFC	Queue
Roxton Road (N)	0.75	3	0.27	0
Link Road	0.10	0	0.55	1
Roxton Road (S)	0.24	0	0.63	2

5.31 Table 5.5 demonstrates that the junction operates with spare capacity with an RFC on the Bedford Road (east) approach during the evening peak of 0.75 with a queue of 3 vehicles.

5.32 The analysis of the Roxton Road roundabout with Chawston Lane Link Road demonstrates that a proposed roundabout would be suitable to serve the full potential allocation at Wyboston of up to 10000 dwellings.

6 Conclusion

6.1 These representations to transport matters, have been prepared by Transport Planning Associates ("TPA") on behalf of Taylor Wimpey UK Limited to support the proposed allocation of land west of Wyboston for development in the emerging Bedford Borough Council (the "Council") Local Plan (2040).

6.2 Land west of Wyboston is allocated for development of 2500 homes in the Council's development strategy options 2b, 2c, and 2d. Taylor Wimpey UK Limited propose that the land west of Wyboston should be allocated for up to 4000 homes and associated infrastructure.

6.3 The land west of Wyboston can deliver a comprehensive, cohesive and connected new community founded upon an exemplar sustainable transport and mobility strategy delivering access to local employment, primary and secondary education and sports and leisure land uses. The Denybrook Garden Community will be accessible to the proposed East-West Rail corridor and new and improved public transport services and upgrades to local public rights of way will deliver and inclusive development.

6.4 The new community will deliver significant new green-infrastructure facilitating access to rural routes and connections to the countryside and introduce inclusive places offering the opportunity for healthier lifestyles for all. High quality, mixed-use development can deliver attractive places to work allowing businesses to grow and the scale of a new community has the potential to attract new investment and support growth.

6.5 Denybrook Garden Community will support the themes and objective of the Council's of its Local Plan to support a stronger local economy.

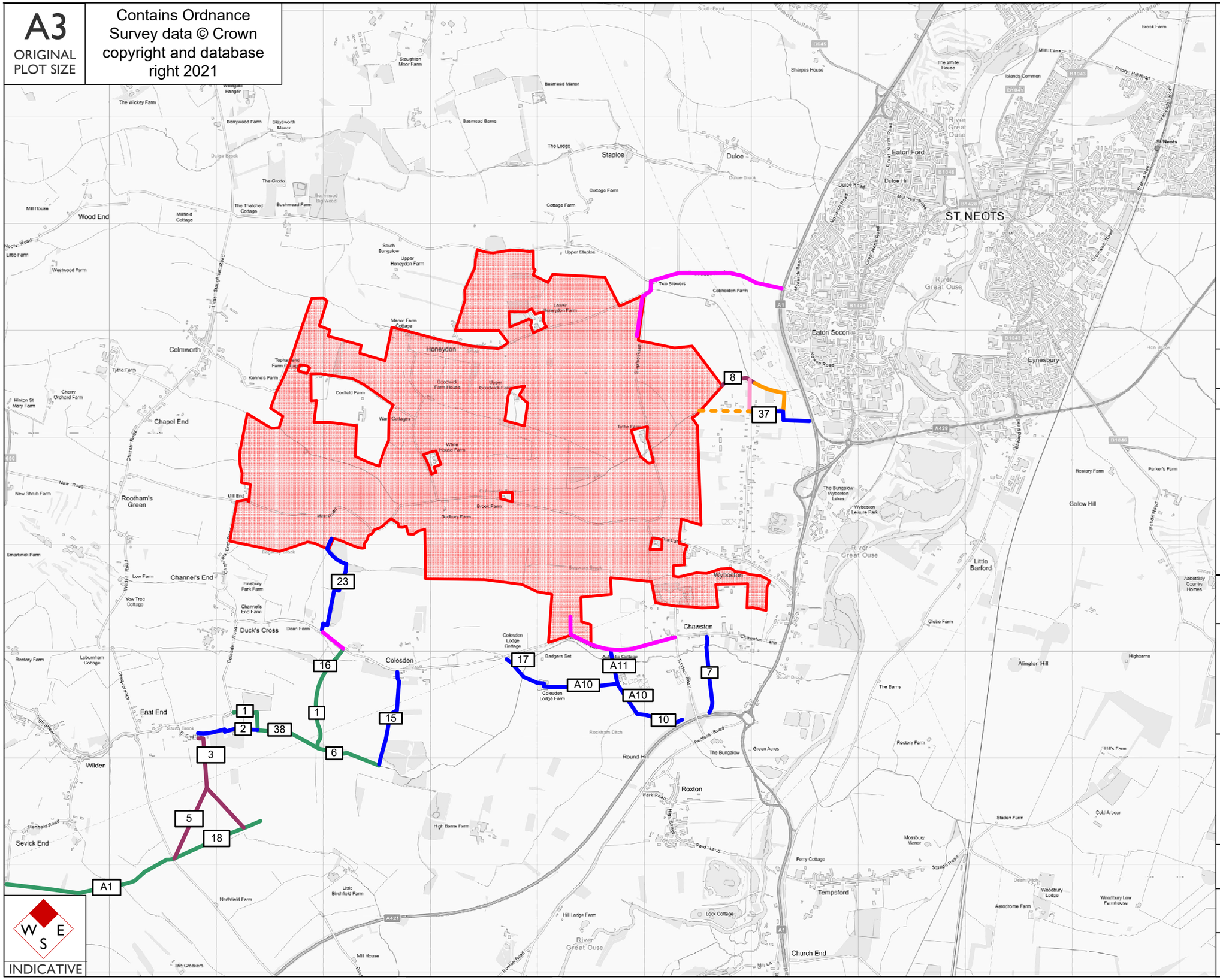
6.6 The Council's transport evidence base supports the allocation of land west of Wyboston for development. In its assessment of highway impacts, the Council's consultant has demonstrated that more than 5000 homes could be delivered without significant impact upon the local highway network, supporting Taylor Wimpey UK Limited's proposal that up to 4000 homes can be allocated in the proposed Local Plan to 2040.

6.7 Analysis undertaken by TPA examining the effect of development on local junctions supports the proposals for the allocation of the land, demonstrating that local highway improvements, in conjunction with a package of sustainable transport improvements are suitable to mitigate the impact of the development and provide for a genuine choice of means of transport, for everyday journeys and trip purposes.

6.8 There are no highway and transport reasons why the land west of Wyboston should not be allocated for development, for up to 4000 homes in the Local Plan period to 2040.

Figures

A3
ORIGINAL PLOT SIZE



Key

- Indicative site boundary
- Existing footpaths
- Existing bridleways
- Upgrade of footpaths to bridleways
- New bridleway provision
- New footway / cycleway provision
- Council led route aspirations
- Potential alternative bridleway route

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Manchester
Oxford
Welwyn Garden City

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Taylor Wimpey UK Limited

Proposed Denybrook Garden Village

Proposed Public Rights of Way and pedestrian / cycleway improvements

STATUS: INFORMATION

SCALE:	PREPARED BY:	CHECKED BY:	APPROVED BY:
NTS	LM	TH	JC

JOB NO:	FIGURE NO:	DATE:
2002-007	1	SEPT '21

A3
ORIGINAL PLOT SIZE

Internal bus routes to be determined by the proposed site layout

Indicative connection to the East-West Rail interchange

To access the northbound carriageway of the A1, bus services would continue southbound to the A1 on-slip within the vicinity of the junction with Tempsford Road

W E S

INDICATIVE

Key

- Indicative site boundary
- Diversion of existing bus route 905
- New service
- Potential new service alternative routes
- Indicative location of the East-West Rail interchange

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Indicative public transport strategy

STATUS: INFORMATION

SCALE:	PREPARED BY:	CHECKED BY:	APPROVED BY:
NTS	LM	TH	JC

JOB NO:	FIGURE NO:	DATE:
2002-007	2	SEPT '21

A3
ORIGINAL PLOT SIZE

Internal bus routes to be determined by the proposed site layout

Indicative location of proposed Highways England improvements

Upgrade of priority junction to roundabout

Indicative connection to the East-West rail interchange

To access the northbound carriageway of the A1, bus services would continue southbound to the A1 on-slip within the vicinity of the junction with Tempsford Road

INDICATIVE

Key

- Indicative site boundary
- Enhanced Public Right of Way network
- Diversion of existing bus service route 905
- New bus route
- Indicative east-west railway interchange
- Existing carriageway to be widened to 7.3m in width – corridor to include proposed footway / cycleway facility
- Existing carriageway to be widened to 6.2m in width – corridor to include proposed footway / cycleway facility
- Localised village enhancements

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Taylor Wimpey UK Limited

Proposed Denybrook Garden Village

Indicative movement strategy context plan

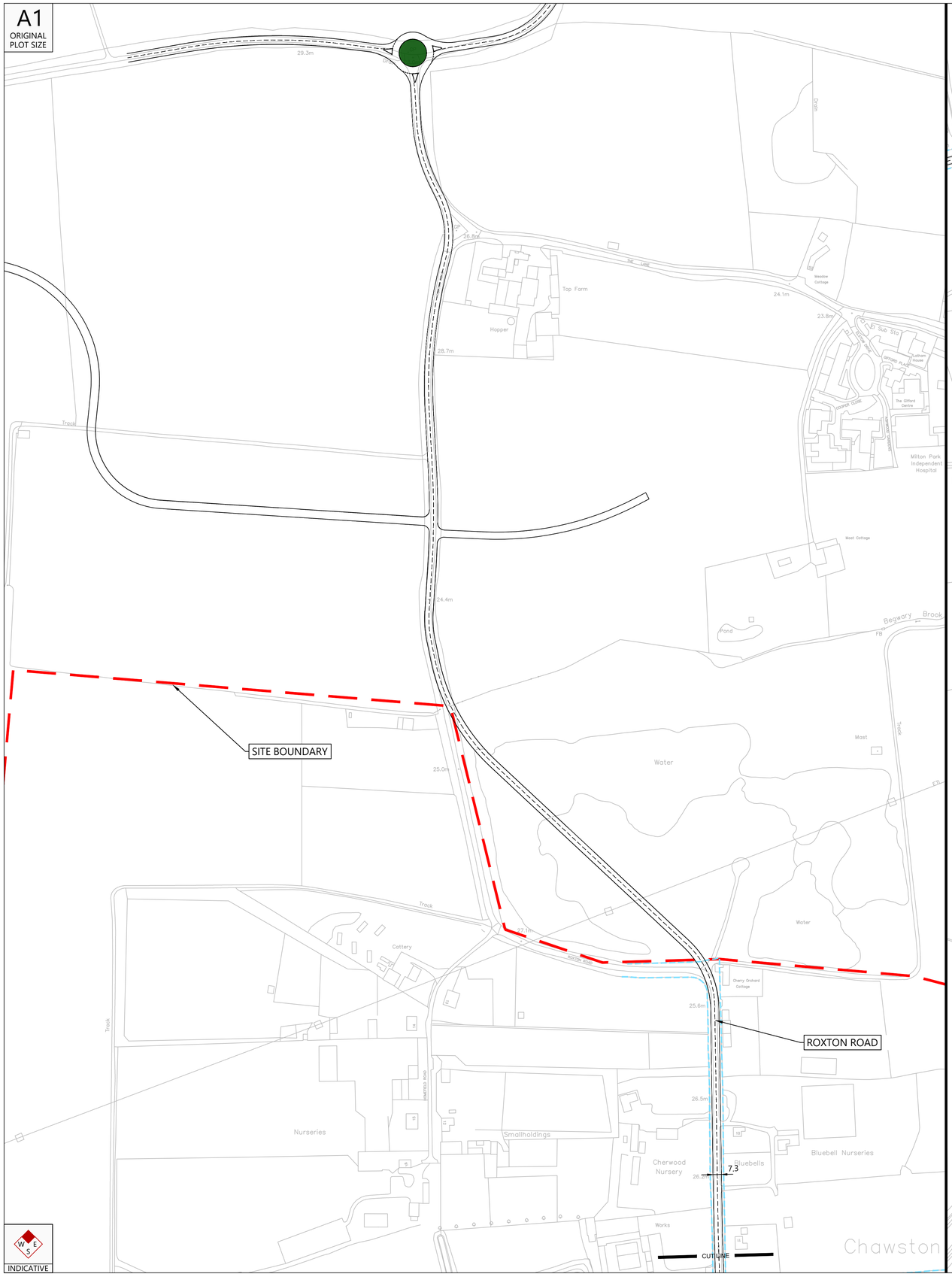
STATUS: INFORMATION

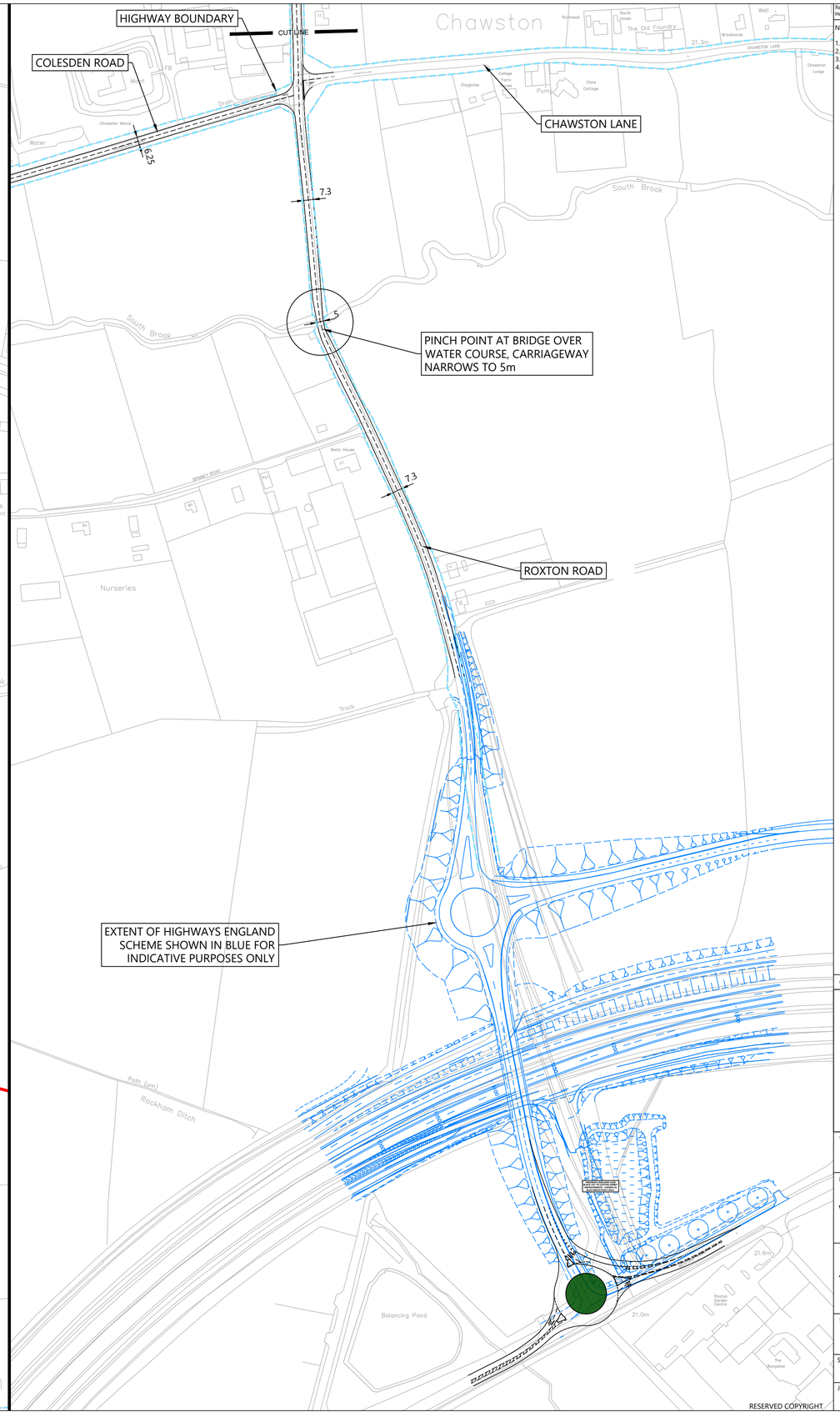
SCALE:	PREPARED BY:	CHECKED BY:	APPROVED BY:
NTS	LM	TH	JC

JOB NO:	FIGURE NO:	DATE:
2002-007	3	SEPT '21

APPENDIX A

A1
ORIGINAL
PLOT SIZE





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NOTES:

1. Indicative un-surveyed existing road markings.
2. Subject to confirmation of Highway Boundary.
3. Subject to topographical survey.
4. Dimensions shown are in metres unless otherwise stated.

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CLIENT:
TAYLOR WIMPEY

PROJECT:
LAND NORTH OF A421
WYBOSTON

TITLE:
PROPOSED IMPROVEMENTS TO COLESDEN ROAD / ROXTON ROAD

STATUS:
FEASIBILITY

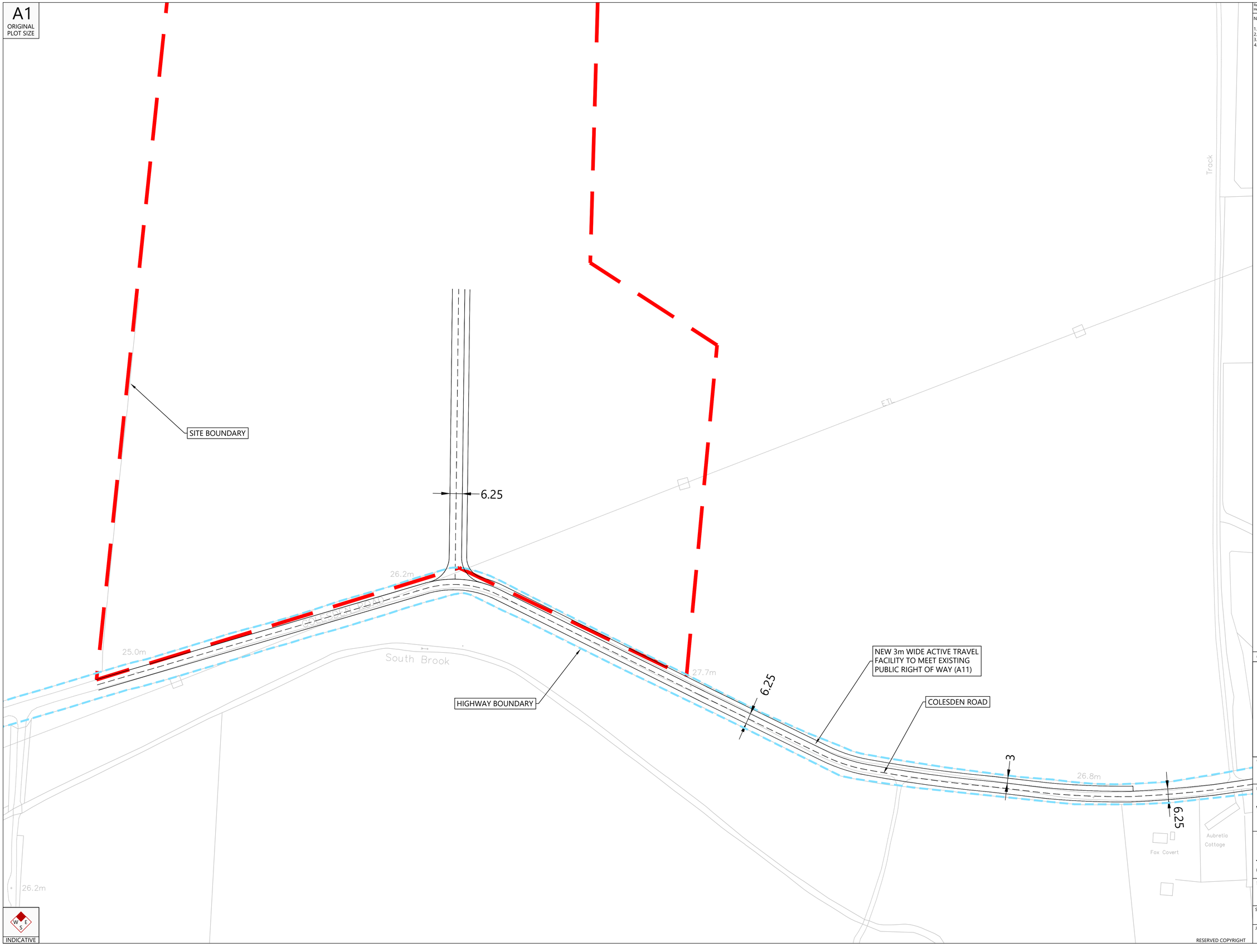
SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:2000	18.08.21	RC	RC	JC

JOB NO:	DRAWING NO:	REVISION:
2002-007	SK13	-

INDICATIVE

APPENDIX B

A1
ORIGINAL
PLOT SIZE



W E S

INDICATIVE

NOTES:

1. Indicative un-surveyed existing road markings.
2. Subject to confirmation of Highway Boundary.
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LAND NORTH OF A421
WYBOSTON

TITLE:
PROPOSED PRIORITY JUNCTION SITE ACCESS COLESDEN ROAD

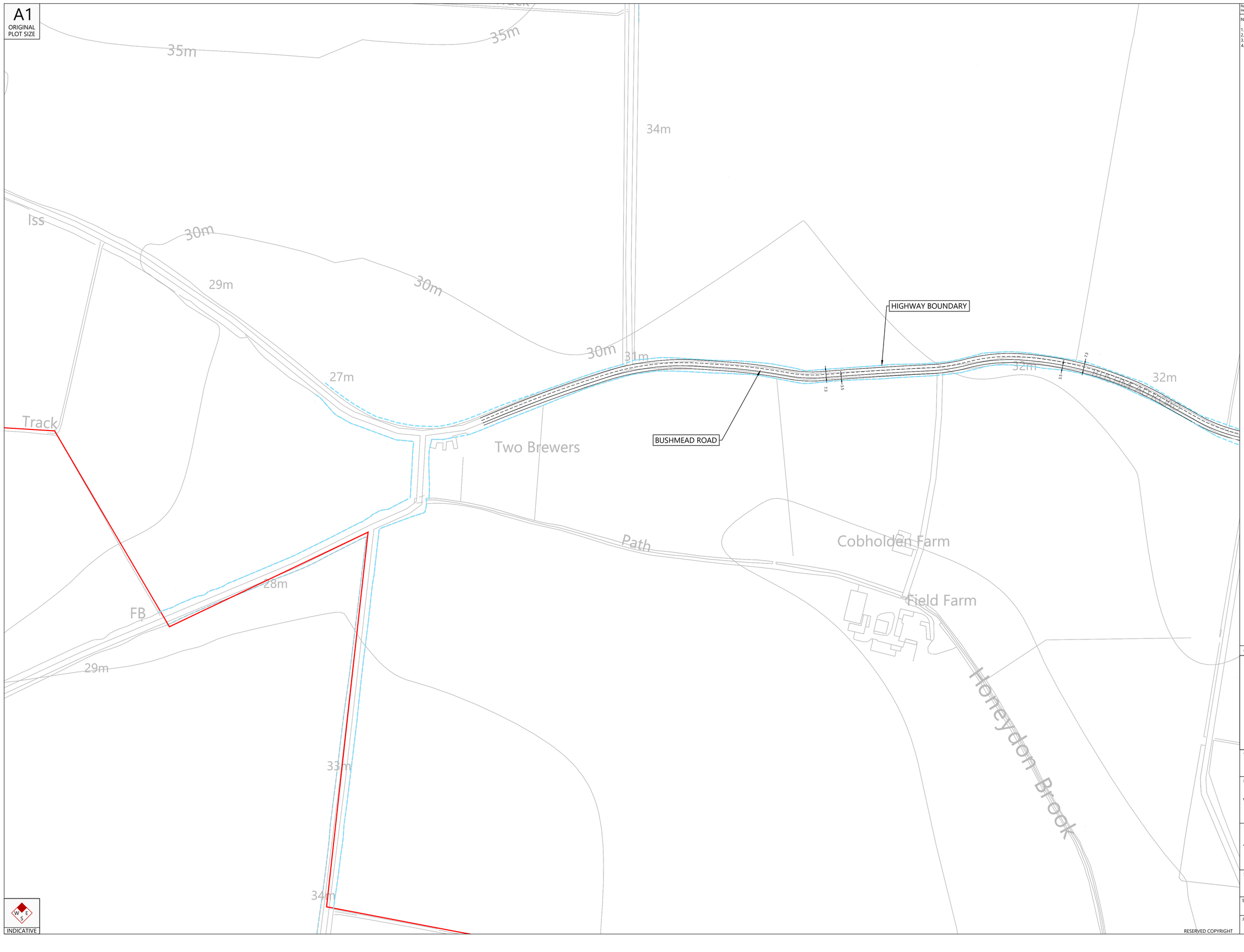
STATUS:
FEASIBILITY

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:1000	18.08.21	RC	RC	JC

JOB NO:	DRAWING NO:	REVISION:
2002-007	SK14	-

APPENDIX C

A1
ORIGINAL
PLOT SIZE



NOTES:

1. Indicative un-surveyed existing road markings.
2. Subject to confirmation of Highway Boundary.
3. Subject to topographical survey.
4. Dimensions shown are in metres unless otherwise stated.

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PROJECT:
LAND NORTH OF A421
WYBOSTON

TITLE:
PROPOSED IMPROVEMENTS
TO BUSHMEAD ROAD

STATUS:
FEASIBILITY

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:2000	18.08.21	RC	RC	JC

JOB NO:	DRAWING NO:	REVISION:
2002-007	SK17	-

INDICATIVE