

UNIVERSAL DESTINATIONS & EXPERIENCES UK PROJECT

Former Kempston Hardwick Brickworks and adjoining land, Bedford

Environmental Statement Volume 1

Chapter 4 - Consideration of Reasonable Alternatives

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4 CONSIDERATION OF REASONABLE ALTERNATIVES

4.1 BACKGROUND

4.1.1. This chapter outlines the reasonable alternatives that have been considered during the iterative design process, together with the principal reasons for proceeding with the Proposed Development.

4.2 REQUIREMENT FOR THE CONSIDERATION OF ALTERNATIVES

- 4.2.1. Schedule 4(2) of the *EIA Regulations 2017* states that an Environmental Statement (ES) should include:
 - "A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects".
- 4.2.2. To accord with Schedule 4(2) of the *EIA Regulations 2017*, this chapter summarises the site selection process and the alternatives that have been considered. As the Proposed Development has adopted a flexible Rochdale Envelope approach the potential for specific alternatives is limited.
- 4.2.3. Furthermore, UDX's scheme selection process identified the Core Zone as the only feasible location for the Theme Park, owing to its size, shape and topography, along with the existing road and rail infrastructure, which has determined the broader access arrangements. The Proposed Development has also been configured to respond to the varying flood risk of the Site avoiding locating more sensitive uses in higher risk areas of the Site, as set out in **Chapter 12: Water Resources (Volume 3)**.
- 4.2.4. As such this chapter outlines the alternatives considered in relation to:
 - A421Junction Designs;
 - Drainage Design Options for the Core Zone; and
 - East West Rail (EWR) Station.
- 4.2.5. The following section begins with an outline of UDX's site selection process and how this resulted in no reasonable alternative sites being considered.

4.3 SITE SELECTION PROCESS

- 4.3.1. UDX's site selection process began in 2022 and considered a range of factors, including:
 - Good transport links for national and international visitors, including close proximity to an
 existing or potential railway station (Kempston Hardwick Station, Wixams Station, East West
 rail station), no more than a two-hour drive from London and close to a motorway or main A
 road;
 - Site size greater than 200 acres (80.94 hectares) in single ownership to facilitate the Proposed Development;
 - Relatively flat topography to reduce requirements for levelling/profiling needed to facilitate
 Theme Park development; and



- Supportive Local Authority, including suitable local planning policy or allocation that might accommodate a Theme Park.
- 4.3.2. The process followed by UDX included the following main phases to identify a number of potentially feasible sites and thereafter to refine this set of sites through increasingly detailed selection criteria:
 - Identification of a long list of potential sites in the UK;
 - Refinement of this long list, driven mainly by the need for a suitable size, proximity to London and site availability;
 - Further refinement based on access and proximity to transport connections and shape and topography of potential sites; and
 - Consideration of technical and economic factors, and whether there were any major or significant planning, legal or policy designations or constraints.
- 4.3.3. The key economic criteria included the proximity of a site to London and suitable transport infrastructure, an adequate employment catchment, and presence of educational institutions to potentially provide workforce training, as well as convenient access for domestic and international tourists. Availability of the land on commercially reasonable terms was also a factor. One site that otherwise satisfied UDX's assessment criteria was eliminated due to the inability to negotiate commercially reasonable terms (price and conditions).
- 4.3.4. The chosen Site performed well against all criteria; no other suitable alternative sites were identified that satisfied all the requirements of UDX's criteria, which included being available on commercially reasonable terms. **Table 4-1** sets out Site-specific considerations in relation to the specified criteria.
- 4.3.5. It is recognised that a different developer has previously given consideration to the development of a major theme park (known as the London Resort) in Swanscombe, Kent, and submitted a Development Consent Order (DCO) application in 2020. The application for a DCO for the London Resort was withdrawn in 2022 following Natural England's intention to have the site designated as a Site of Special Scientific Interest. Given the statutory designation of the site as a Site of Special Scientific Interest, and due to viability and economic reasons, the London Resort site was not considered a viable alternative by UDX.

Table 4-1 - Site Selection Considerations for the Site

Criterion	Site Specific Factors
Good transport links for domestic and international visitors	Proximity to Luton Airport – approximately 30 mins by rail. Proximity to A421, with links to M1, providing access to London in less than two hours. Proximity to Kempston Hardwick Station, as well as Bedford station which is serviced by two rail lines (Marston Vale Railway Line and the Midland Main Railway Line) providing access to visitors travelling both from east-west and north-south.
Site size greater than 200 acres (80.94 hectares) to facilitate a Theme Park	The Site provides in excess of the required area and was largely within a single ownership This Site includes a large brownfield site (Lake Zone, former brickworks) and an area of predominantly moderate or lower value arable agricultural land (Lake Zone, West Gateway Zone and Core Zone).



Criterion	Site Specific Factors
Site to be relatively flat to negate requirements for levelling/profiling and shaped to facilitate Theme Park development	The area for the Theme Park portion of the Proposed Development is relatively flat with very little variation in the highest point of the Site (37m) and the lowest point of the Site (20m).
Supportive host Local Authority	Bedford BC is supportive of the Proposed Development.
Suitability of surrounding area.	Adjacent sites to the Core Zone and Lake Zone include industrial and large scale retail uses. Asda and Sainsbury's distribution warehouses are located east of the Lake Zone, the Interchange Retail Park to the north of the Lake Zone, and a significant B&M distribution retail park to the west of the Lake Zone. The CEMEX Bedford Concrete Plant, G Moore Haulage, and BCA Bedford car auction house adjoin the northeastern boundary of the Core Zone.
Adequate employment catchment	The Site is located within a 60-minute drive-time catchment of roughly 1.4 million working-age residents. Within this deep labour pool, 284,000 (20.4 %) are employed in distribution, hotels and restaurants and a further 59,600 (4.3 %) in arts, entertainment, recreation and other services, closely mirroring national sector shares, ensuring a readily available, sector-relevant workforce to staff the roles the Entertainment Resort Complex will create.
Presence of educational institutions to provide workforce training	Bedford College, Kimberley College, University of Bedford and Cranfield University are all located within the local area.
Site availability	Available suitably sized site.

4.4 A421 JUNCTION DESIGN

- 4.4.1. The location of the Proposed Development was selected, in part, due to its sustainable transport links and proximity to the A421. An iterative approach to the design of the access from the A421 to the Proposed Development has been undertaken. The main alternatives and environmental considerations are set out in **Table 4-2**, which include the following:
 - "Do Nothing" scenario;
 - New A421 Junction with construction of new access road across Marston Vale Railway Line, connecting into the northern part of the Core Zone; and
 - New A421 Junction with construction of new access road across Marston Vale Railway Line, connecting into the southern part of the Core Zone.



Table 4-2 – Consideration of Alternative Junction Design Options

Junction Design Option	Description	Benefits	Disadvantages	Selected?
Do-Nothing	Routing of vehicular traffic to the Proposed Development from the A421, using the existing local road network. Traffic from the north would exit A421 at Marsh Leys junction and travel to Site via Woburn Road. Traffic from the south would exit A421 at Marston Moretaine junction and travel to Site via Bedford Road.	Lowest cost option. Minimised additional third party land purchase. Minimises scale of construction programme, reducing disruption, and noise and air emissions during Construction Phase. Reduces embodied carbon emissions by removing an element of the Proposed Development.	Potential for significant traffic impacts on local road networks during both Construction Phase and Operational Phase. Potential for significant adverse air quality impacts, including within Bedford Town, which is an existing Air Quality Management Area as a result of increased congestion, waiting and idling cars on road network.	No. Initial traffic modelling undertaken demonstrated that there was not sufficient capacity at existing A421 junction to accommodate levels of construction and operational traffic. Therefore, it was decided that a new strategic junction would be constructed on the A421 facilitating direct access to the Proposed Development.
New A421 Junction and access into north of Core Zone.	Various junction and new road access designs including north and south bound slip roads from A421, and new road connection between Fields Road and Manor Road/northwestern corner of Core Zone. Indicative examples of the optioneering associated with this option are shown in Image 4.1 and 4.2.	Maximises the integration with and reuse of existing road infrastructure.	Likely to result in the removal of area of community woodland known as Gateway Woods and/or potentially other environmentally sensitive adjacent lands. Land for new access road between Fields Road and Core Zone is not owned or controlled by National Highways (NH), Bedford Borough Council (Bedford BC) or UDX. Would require the purchase of additional land from a third-party. Some junction designs would also require compulsory purchase	No.



Junction Design Option	Description	Benefits	Disadvantages	Selected?
			of a plot at Bedford Commercial Park. Some junction designs would impact the existing Fields Road Bridge. Requires the construction of a new road bridge over the Marston Vale Railway Line. Would likely result in significant adverse noise and visual impacts to land currently occupied by existing D&G Noble haulage business.	
New A421 Junction with construction of new access road across Marston Vale Railway Line connecting into south of Core Zone – Option A	Various junction and new road access designs including north and south bound slip roads from A421, loop diverge for northbound slip, and new access road providing access road into southwestern corner of Core Zone. Indicative examples of the optioneering associated with this option are shown in Image 4.3 and 4.4.	Does not impact or require removal of Gateway Woods. Avoids impacts on, and the requirement for purchase of, additional third-party land occupied by D&G Noble haulage business. Land for new access road between Woburn Road and Core Zone under option contract by UDX.	Requires purchase of Bedford Commercial Park land. Loop diverge for northbound slip required. Requires the construction of a new road bridge over the Marston Vale Railway Line.	No.
New A421 Junction with construction of new access road across Marston Vale Railway Line connecting into	Various junction and new road access designs including north and south bound slip roads from A421, and new access road providing	Most direct route for road users on northbound slip. Location enables the introduction of a southbound entry slip lane off the A421 thereby	Requires the construction of a new road bridge over the Marston Vale Rail Line.	Yes.



Junction Design Option	Description	Benefits	Disadvantages	Selected?
south of Core Zone – Option B	access road into southwestern corner of Core Zone. Indicative examples of the optioneering associated with this option are shown in Image 4.5 and 4.6.	reducing the impacts on the local road network of traffic heading south. Lowest total area of land take required of all A421 Junction and access road options. Does not impact or require removal of Gateway Woods. Avoids impacts on, and the requirement for purchase of, additional third party land occupied by D&G Noble haulage business. Land for new access road between Woburn Road and Core Zone under option contract by UDX. Removes requirement for purchase of plot at Bedford Commercial Park.		



Image 4-1 and Image 4-2 illustrating indicative examples of the optioneering for a new A421 Junction and access into north of Core Zone



Figure 4-1 – indicative examples

Figure 4-2 – indicative examples

Image 4-5 and Image 4-6 illustrating indicative examples of the optioneering for a new A421 Junction with construction of new access road across Marston Vale Railway Line connecting into south of Core Zone – Option A

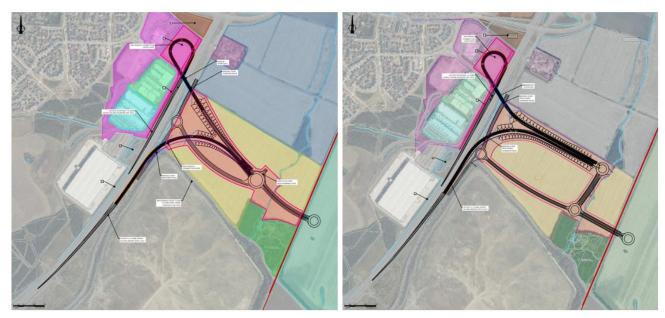


Figure 4-3 – indicative examples

Figure 4-4 – indicative examples



Image 4-5 and Image 4-6 illustrating indicative examples of the optioneering for a new A421 Junction with construction of new access road across Marston Vale Railway Line connecting into south of Core Zone – Option B



Figure 4-5 – indicative examples

Figure 4-6 – indicative examples

- 4.4.2. An iterative approach was taken for the design of a new strategic access for the Theme Park from the A421 to the Core Zone. A range of options were considered in order to select an access solution that provided the best technical design whilst seeking to minimise negative environmental impacts where possible. A Do-Nothing approach and the construction of a new A421 Junction and access road providing access into the north of the Core Zone were discounted due to the potential for congestion, the potential requirement for additional land, potential removal of community woodland, and potential noise, air quality and visual impacts on existing businesses.
- 4.4.3. The selected A421 Junction access option for the Proposed Development, as shown in the Annex 7: Highways Drawings of Appendix 5.1: Transport Assessment (Volume 3) (Document Reference 4.5.1.8.0), is a refined iteration of the options presented in Images 4.5 and 4.6 and comprises the provision of a new A421 junction and new access road connecting into the south of the Core Zone. It is the option that has the most benefits, as can be seen in Table 4-2 above. The land required for the new access road and new A421 junction will not require the purchase of additional third party land, will not result in the loss of community woodland, provides the most direct route onto the A421 for traffic heading north and enables a more efficient exit onto the A421 for Theme Park visitors and staff heading south, thereby reducing potential impacts on the local road network, and it has the smallest overall footprint of any access option, reducing overall land take.



4.5 DRAINAGE DESIGN OPTIONS FOR THE CORE ZONE

4.5.1. An existing privately maintained watercourse in the form of a ditch crosses the Core Zone diagonally from the southeast corner (high point 33.36m AOD) to the northwest corner (low point 32.50m AOD). The outflow from the ditch joins drainage swales along Manor Road. To construct the Theme Park and its supporting elements within the Core Zone a sustainable drainage strategy has been developed, referred to further in **Chapter 12: Water Resources (Volume 1)**. Consideration was given to a number of options for the ditch within the sustainable drainage strategy including abandonment/stopping up, culverting, incorporating the ditch into the Proposed Development and diversion of the ditch. **Table 4-3** sets out a review of alternative drainage design options including benefits and disadvantages.

Table 4-3 – Review of Alternative Drainage Design Options

Drainage Option	Benefits	Disadvantages	Option selected?
Abandonment	Maximises developable area of Core Zone. Removes the risk of uncontrolled/untreated waters off-site contaminating the Proposed Development and potential impacts to Theme Park visitors.	Increases flood risk to surrounding areas and the Proposed Development as water catchments from Stewartby feed into the ditch from the east and southeast. Loss of ecological habitat.	No.
Culverting the entire length of the ditch across the Core Zone	Maximises the developable area of the Core Zone.	Comparatively expensive and would require ongoing maintenance. Loss of ecological habitat. Increases flood risk through lack of visibility, difficulty of maintenance, likeliness of debris entering culvert and blocking flows.	No.
Incorporation of existing watercourse into the Proposed Development	Minimises impacts on existing watercourse and drainage regime. Least impact to ecological features. Maintains current function as overflow catchment from neighbouring developments.	Risk of uncontrolled/untreated incoming flows from off-site through the Theme Park causing a risk to human health from contamination, and an impact to business e.g., shutting down during clean up of potential contamination. Limits options for ongoing development within the ERC boundary.	No.



Drainage Option	Benefits	Disadvantages	Option selected?
Diversion Option A - along western boundary of the Core Zone.	Initial preferred route, ideally located in parallel with road and rail infrastructure, furthest away from key visitor facing areas. Improves existing watercourse regime by increasing length, cross sectional shape.	Reroutes water flows against natural topography of the Site increasing flood risk. Challenging to capture offsite flows from Stewartby and the existing Coronation Pits. Would result in excessive watercourse depth along majority of its length requiring increased removal of materials and safety/maintenance risk. Total diversion length approximately 3km (south, west and northern boundaries). Bank reinforcement/stabilisation would likely be required.	No.
Diversion Option B - along eastern boundary of the Core Zone.	Route allows for easy capture of off-site flows from Stewartby and the existing Coronation Pits. At, or closer to, the existing low point of the Site for a greater length than Option A (western boundary), reducing excessive depths. E.g. 900m length at 2.5m depth, 400m length at 4m depth, 500m length at 5m depth. Diversion length (approximately 1.5km) which is significantly shorter than Option A. Improves existing watercourse regime by increasing length, and cross sectional shape.	Route is located in the area allocated for the main Theme Park and visitor facing areas, reducing the preferred developable area. Where the watercourse routes through the northern area, becomes 5m deep which could take up developable land through reinforcements. Bank reinforcement/stabilisation may be required.	Yes.



Drainage Option	Benefits	Disadvantages	Option selected?
	New watercourse provides a stable channel morphology and it is anticipated that this will support the development of new aquatic and riparian habitat.		
	Can be accommodated whilst allowing the flexibility required to deliver the core elements of the Proposed Development.		

- 4.5.2. Due to the value of the watercourse not only for the drainage of the Proposed Development, but also for the neighbouring areas such as Stewartby and the Coronation Pits, diversion of the watercourse along the eastern boundary of the Core Zone was selected as the preferred option due mainly to it being shorter in length, shallower in depth whilst maintaining existing incoming drainage connections from the east. Its design can be incorporated within the Core Zone, whilst allowing the flexibility required to deliver the core elements of the Proposed Development. From an ecological perspective, the selected watercourse diversion will provide a stable channel morphology which will support the development of new aquatic and riparian habitat.
- 4.5.3. **Chapter 12: Water Resources (Volume 1)** provides more detail about the Core Zone and Lake Zone surface water management system and drainage strategy for the Site.

4.6 EAST WEST RAIL STATION

- 4.6.1. The Proposed Development includes the safeguarding of land within the West Gateway Zone for a new EWR Station and the land would be brought forward as ERC should the rail station not be brought forward.
- 4.6.2. Consideration was given to including the new EWR Station within the Proposed Development. However, as the station would be delivered by EWR Company it was considered preferable for it to be consented separately.
- 4.6.3. As explained in **Chapter 3: Approach to EIA (Volume 1)**, to provide a conservative assessment that accords with the cautious worst case¹ approach used throughout this ES, the EIA has considered the delivery of an EWR Station within the safeguarded land as an inherent part of the assessment.

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¹ Where the phrase cautious worst case is used it means "a cautious worst case that provides a robust assessment of likely significant effects".



- 4.6.4. It is recognised that the non-delivery of the EWR Station may represent the cautious worst case scenario from a transport perspective for the assessment of effects during operation. As a result the assessment of transport-related effects, including of noise and air quality emissions from transport, has also been assessed through consideration of multiple scenarios, including the non-delivery of the EWR Station, as set out in **Chapter 3: Approach to EIA (Volume 1)**.
- 4.6.5. Should the EWR Station not be delivered then the safeguarded land would be brought forward as ERC. Such development would be of a comparable type and scale to the adjacent proposed development within the West Gateway Zone. It would also be subject, during both construction and operation, to similar mitigation as that adjacent development. As such, the development of the safeguarded land as ERC would be unlikely to introduce new or different significant environmental effects to those reported in this ES.
- 4.6.6. As a result, the alternative of including the EWR Station within the Proposed Development has been documented inherently through the ES.

4.7 SUMMARY AND CONCLUSION

- 4.7.1. This chapter has set out a review of the reasonable alternatives considered through the iterative design process, set out as follows:
 - A421Junction Designs;
 - Drainage Design Options for the Core Zone; and
 - EWR Station.
- 4.7.2. The environmental benefits of each option have been considered as part of the iterative design process. The overarching environmental benefits of the Site relate to its proximity to public transport options, the existing site profile, and the Site extents are able to accommodate a development of this size and scale.
- 4.7.3. All other beneficial effects associated with the Proposed Development are set out in each of the relevant technical ES chapters.



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