

11 SUMMARY AND RESIDUAL EFFECTS

Introduction

- 11.1 This chapter summarises the mitigation measures and residual effects identified in each of the technical assessments included in the ES, which has been prepared to accompany the applications for the RDZ and Sports Halls as follows:

"Demolition of existing college buildings, removal of hard-surfacing, site clearance and groundworks together with the redevelopment of the site to provide 212 residential units across a collection of buildings up to 5 storeys in height; together with associated parking for 110 vehicles, cycle parking, open space and landscaping."

And

"Erection of Sports Hall with associated car parking, landscaping, and other works within the Main College Development Zone, and alterations and extension to existing Sports Hall including associated landscaping within the Tech Hub Development Zone as defined under application 15/3038/OUT."

- 11.2 Following assessment of the Development, additional mitigation measures have been proposed to be secured and implemented. These are set out in Table 11.1 (for the RDZ application) and 11.2 (for the RuTC and RTS Sports Halls application) below along with the residual effects of the Development following mitigation.

Table 11.1: Significance Table for the RDZ Application

Stage	Effect	Mitigation	Residual Significance
Townscape & Visual Effects			
Construction	TCA 8 - Langhorn Drive	<ul style="list-style-type: none"> Controlling the lighting of construction compounds and machinery to minimise upward and outward light pollution through lantern design, direction and baffling, and ensuring that the minimum area only is lit, for the minimum period of time while satisfying other health and safety requirements; Restricting the movement of stockpiles to minimise vehicle tracking across the Site and perception of instability in the townscape; and Locating compounds and stockpiles in the least visible locations with the Site, including for rendering of facades to aid in integrating their form within views. 	Minor Adverse
	Site		Moderate Adverse
	Site Context Photograph 5		Moderate Adverse
	Site Context Photograph 11		Moderate Adverse
	Site Context Photograph 12		Moderate Adverse
	Site Context Photograph 13		Moderate Adverse
	Site context Photograph 14		Moderate Adverse
	Site Context Photograph 18		Moderate Adverse
Operation	TCA 8 - Langhorn Drive	<ul style="list-style-type: none"> The implementation and maintenance of the hard and soft landscape proposals throughout the lifetime of the Development, including advanced planting where practicable (and within first available planting season). 	Minor Beneficial
	Site		Moderate Beneficial
	Site Context Photograph 5		Moderate Beneficial
	Site Context Photograph 11		Moderate Beneficial
	Site Context Photograph 12		Moderate Beneficial
	Site Context Photograph 13		Moderate Beneficial
	Site context Photograph 14		Moderate Beneficial
	Site Context Photograph 18		Moderate Beneficial
Transport and Access			
Construction	Traffic flows effects	Implementation of a detailed Construction Environmental Management Plan (CEMP), to include a Construction Logistics Plan (CLP) and Construction Method Statement. To be secured by planning condition.	Negligible
	Pedestrian and cycle flow effects		Negligible
	Severance		Negligible
	Pedestrian/Cycle Amenity & Delay		Negligible
	Fear and Intimidation		Negligible
	Accidents and Safety		Negligible
	Parking		Negligible
	Public Transport		Negligible
Operation	Traffic flows effects	Implementation of a detailed Travel Plan and Delivery & Servicing Plan. To be secured by planning condition.	Negligible
	Pedestrian and cycle flow effects		Negligible
	Severance	Improvements to access at Egerton Road for pedestrians and cyclists only including new crossing facilities.	Negligible
	Pedestrian/Cycle Amenity & Delay		Negligible
	Fear and Intimidation		Negligible
	Accidents and Safety	Additional on-street parking provision on Egerton Road including the addition of a car club bay/space.	Negligible
	Parking		Negligible
	Public Transport		Negligible

Stage	Effect	Mitigation	Residual Significance
Air Quality			
Construction	Fugitive dust emission impacts on amenity and health	An outline CEMP has been prepared (refer to Appendix 5.1) to control potential impacts during the construction phase. Further mitigation measures such as those identified in 8.31 will be provided in a detailed CEMP. This will be secured through attachment of a suitably worded planning condition to any forthcoming consent.	Negligible
Operation	Road traffic vehicles exhaust emissions associated with vehicles travelling to and from the Site	A number of mitigation measures have been identified to encourage the use of sustainable transport modes and manage vehicle flow around the Site. These include the implementation of a Travel Plan, provision of secure cycle parking and the installation of electric vehicle charging points throughout the Site.	Negligible
Noise			
Construction	Construction Noise	Management measures, legislative and local authority controls such as Good Practice, compliance with requirements of BS 5228:2008. Submission of outline CEMP (Appendix 5.1). Measures will be secured by planning conditions on the future permission, which will require further details to be submitted for approval by way of a detailed CEMP prior to construction of the Development.	Minor Adverse
	Construction road Traffic Noise	Predicted increase of 0.2dBA. Considerably below a 3dB change. No mitigation required	Negligible
Operation	Suitability of the Site for residential Development	Localised mitigation, double glazing, plant noise condition not to exceed background level at existing receptors or above 45dB LAeq at future residents.	Negligible
	Noise from Mechanical Services Plant – Existing Receptors	Plant noise condition not to exceed current background level.	Negligible
	Noise from Mechanical Services Plant – Proposed Receptors	Plant noise condition not to exceed current background level or above 45dB LAeq at future receptors.	Negligible
	Road traffic noise	None Required.	Negligible
Population and Human Health			
Construction	Employment	None Required	Minor Beneficial
	Wider Human Health	Implementation of the CEMP	Emissions to air: negligible Emissions of noise: negligible Effects to townscape and visual amenity: minor to moderate adverse

Stage	Effect	Mitigation	Residual Significance
			Transport disturbance: negligible
Operation	Housing Delivery	None Required	Moderate Beneficial
	Primary Education	None Required	Negligible
	Secondary Education	None Required	Negligible
	GP Provision	Financial contribution	Negligible
	Wider Human Health	None required	Health Inequalities: moderate beneficial Emissions to air: negligible Emissions of noise: negligible Effects to townscape and visual amenity: minor to moderate beneficial Transport disturbance: negligible
	Open/Play space and Sports/Recreation	None Required	Major Beneficial

Table 11.2: Significance Table for the RuTC and RTS Sports Halls application

Stage	Effect	Mitigation	Residual Significance
Townscape & Visual Effects			
Construction	TCA 8 - Langhorn Drive	<ul style="list-style-type: none"> Controlling the lighting of construction compounds and machinery to minimise upward and outward light pollution through lantern design, direction and baffling, and ensuring that the minimum area only is lit, for the minimum period of time while satisfying other health and safety requirements; Restricting the movement of stockpiles to minimise vehicle tracking across the Site and perception of instability in the townscape; and Locating compounds and stockpiles in the least visible locations with the Site, including for rendering of facades to aid in integrating their form within views. 	Minor Adverse
	Site		Moderate Adverse
	Site Context Photograph 5		Moderate Adverse
	Site Context Photograph 11		Moderate Adverse
	Site Context Photograph 12		Moderate Adverse
	Site Context Photograph 13		Moderate Adverse
	Site context Photograph 14		Moderate Adverse
	Site Context Photograph 18		Moderate Adverse
Operation	TCA 8 - Langhorn Drive	<ul style="list-style-type: none"> The implementation and maintenance of the hard and soft landscape proposals throughout the lifetime of the Development, including 	Minor Beneficial
	Site		Moderate Beneficial

Stage	Effect	Mitigation	Residual Significance
	Site Context Photograph 5	advanced planting where practicable (and within first available planting season).	Moderate Beneficial
	Site Context Photograph 11		Moderate Beneficial
	Site Context Photograph 12		Moderate Beneficial
	Site Context Photograph 13		Moderate Beneficial
	Site context Photograph 14		Moderate Beneficial
	Site Context Photograph 18		Moderate Beneficial
Transport and Access			
Construction	Traffic flows effects	Implementation of a detailed Construction Environmental Management Plan (CEMP), to include a Construction Logistics Plan (CLP) and Construction Method Statement. To be secured by planning condition.	Negligible
	Pedestrian and cycle flow effects		Negligible
	Severance		Negligible
	Pedestrian/Cycle Amenity & Delay		Negligible
	Fear and Intimidation		Negligible
	Accidents and Safety		Negligible
	Parking		Negligible
Public Transport	Negligible		
Operation	Traffic flows effects	Implementation of a detailed Travel Plan and Delivery & Servicing Plan. To be secured by planning condition.	Negligible
	Pedestrian and cycle flow effects		Negligible
	Severance		Negligible
	Pedestrian/Cycle Amenity & Delay	Improvements to access at Egerton Road for pedestrians and cyclists only including new crossing facilities.	Negligible
	Fear and Intimidation		Negligible
	Accidents and Safety		Negligible
	Parking		Negligible
Public Transport	Additional on-street parking provision on Egerton Road including the addition of a car club bay/space.	Negligible	
Air Quality			
Construction	Fugitive dust emission impacts on amenity and health	An outline CEMP has been prepared (refer to Appendix 5.1) to control potential impacts during the construction phase. Further mitigation measures such as those identified in 8.31 will be provided in a detailed CEMP. This will be secured through attachment of a suitably worded planning condition to any forthcoming consent.	Negligible
Operation	Road traffic vehicles exhaust emissions associated with vehicles travelling to and from the Site	A number of mitigation measures have been identified to encourage the use of sustainable transport modes and manage vehicle flow around the Site. These include the implementation of a Travel Plan, provision of secure cycle parking and the installation of electric vehicle charging points throughout the Site.	Negligible
Noise			

Stage	Effect	Mitigation	Residual Significance
Construction	Construction Noise	<p>Management measures, legislative and local authority controls such as Good Practice, compliance with requirements of BS 5228:2008.</p> <p>Submission of outline CEMP (Appendix 5.1). Measures will be secured by planning conditions on the future permission, which will require further details to be submitted for approval by way of a detailed CEMP prior to construction of the Development.</p>	Minor Adverse
Operation	Noise from Mechanical Services Plant – Existing Receptors	Plant noise condition not to exceed current background level	Negligible
	Noise from Mechanical Services Plant – Proposed Receptors	Plant noise condition not to exceed current background level or above 45dB L _{Aeq} at future receptors	Negligible
	Road traffic noise	None Required.	Negligible
Population and Human Health			
Construction	Employment	None Required	Minor Beneficial
	Wider Human Health	Implementation of the CEMP	<p>Emissions to air: negligible</p> <p>Emissions of noise: negligible</p> <p>Effects to townscape and visual amenity: minor to moderate adverse</p> <p>Transport disturbance: negligible</p>
Operation	Housing Delivery	Not applicable	Not applicable
	Primary Education	Not applicable	Not applicable
	Secondary Education	Not applicable	Not applicable
	GP Provision	Not applicable	Not applicable
	Wider Human Health	None required	<p>Health Inequalities: moderate beneficial</p> <p>Emissions to air: negligible</p> <p>Emissions of noise: negligible</p>

Stage	Effect	Mitigation	Residual Significance
			Effects to townscape and visual amenity: minor to moderate beneficial Transport disturbance: negligible
	Open/Play space and Sports/Recreation	None Required	Major Beneficial

Interactive Effects

- 11.3 Regulation 4 (2) states that an ES must include a description of the aspects of the environment likely to be significantly affected by the Development and the interrelationship between these effects. There is no published methodology for determining the significance of interactive or synergistic effects. Combining effects with respect to one environmental discipline with another has to be qualitative and is necessarily based on judgment. Therefore, a matrix system has been used to indicate where such effects would likely occur for the construction and operational phases, highlighting where effects occur to a common receptor. This has been informed by the residual effects of the Development (as identified above in Table 11.1 and 11.2) and are those effects where greater than negligible effects have been identified, where they relate to a common receptor. The findings of this exercise are set out in Table 11.3 below.

Table 11.3 Interactive Effects

Effect	Local Population	Users of the Local Road Network
	Construction Phase	
Views of vehicles and machinery being used during the demolition and construction period	✓	✓
Demolition and Construction dust	✓	✗
Demolition and Construction noise (plant and machinery)	✓	✗
	Operational Phase	
Views of the Development	✓	✗
Noise from traffic associated with the operation of the Development	✓	✗
New recreational space creation	✓	✗
New housing provision	✓	✗
Address existing health inequalities	✓	✗

*indicates where an effect may occur.

- 11.4 The proposed demolition and construction works, as set out in Chapter 5, are considered to give rise to potential interactive effects, given the scale of the Development and its urban context. During the demolition and construction phase it is considered that interactions could potentially occur between temporary noise effects and adverse townscape and visual effects on nearby residential receptors. Individually these effects are expected to range from negligible to moderate adverse at worst (as set out in Table 11.1 and 11.2 above). It is therefore considered that the interactive effects during demolition and construction on the surrounding area would also range from negligible to moderate adverse at worst. Any moderate adverse effects would be temporary in duration and are likely to be associated only with the peak periods of demolition and construction activity.

- 11.5 Appropriate mitigation during the demolition and construction phase has been identified in the ES as necessary, such as best practice measures to reduce or eliminate potential adverse environmental effects of demolition and construction as far as possible. Furthermore, the Construction Methodology and Phasing Chapter (see Chapter 5) proposes a programme, which will ensure that the Development would be implemented in the most efficient manner. This includes measures which have been incorporated into the Outline Construction Environmental Management Plan (CEMP) (refer to Appendix 5.1) for the Development (see Chapter 5 for further details). Measures set out in the outline CEMP will be secured by planning conditions on the future permission, which will require further details to be submitted for approval by way of a detailed CEMP prior to construction of the Development. Relevant legislative requirements would also need to be adhered to.
- 11.6 Operational phase effects have been assessed and reported in full within the technical chapters of the ES and the residual effects are summarised in Table 11.1 and 11.2. No significant adverse effects have been predicted during operation, with the exception of some moderate adverse effects on townscape and views. Significant beneficial effects have been identified to the provision of housing and recreational space, and in addressing health inequalities.

Cumulative Effects Summary

- 11.7 Each of the technical assessments considers the likely significant cumulative effects of the Development with the cumulative schemes set out in Chapter 2. The technical assessments identified the following significant beneficial cumulative effects:

RDZ Application

- Moderate beneficial, permanent landscape and visual effects during operation.

RuTC and RTS Sports Halls Application

- Moderate beneficial, permanent landscape and visual effects during operation; and
- Major beneficial, permanent effect to Open/Play space and Sports/Recreation provision during operation.

- 11.8 The technical assessments identified the following significant adverse cumulative effect:

RDZ Application

- Moderate adverse, temporary landscape and visual effects during construction; and
- Minor-moderate adverse, temporary effect to noise environment from construction activity.

RuTC and RTS Sports Halls Application;

- Moderate adverse, temporary landscape and visual effects during construction; and
- Minor-moderate adverse, temporary effect to noise environment from construction activity.

Conclusions

11.9 The Development will result in the following significant beneficial residual effects:

RDZ Application

- Moderate beneficial, permanent landscape and visual effect during operation;
- Moderate beneficial, permanent effect to housing delivery during operation; and
- Moderate beneficial, permanent effect to health inequalities during operation.

RuTC and RTS Sports Halls Application

- Moderate beneficial, permanent landscape and visual effects during operation;
- Moderate beneficial, permanent effect to health inequalities during operation; and
- Major beneficial, permanent effect to Open/Play space and Sports/Recreation provision during operation.

11.10 The technical assessments identified that the Development will result in the following significant adverse residual effects:

RDZ Application

- Moderate adverse, temporary landscape and visual effects during construction.

RuTC and RTS Sports Halls Application

- Moderate adverse, temporary landscape and visual effects during construction.