

reside.

Land west of Fontwell Avenue, Eastergate

D2776_FAB_00_XX_RR_L_0001 PLO2
Landscape Design Risk Assessment (CDM)

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Project Number	D2776	Project Stage	Planning	Revision	PL02	
Project Name	Land at Fontwell Avenue, Eastergate	Document Title	Landscape Design Risk Assessment (CDM)	Issued Date	30.04.2020	
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GENERAL STANDARDS AND EXPECTATIONS

This document has been prepared, on behalf of Reside to identify specific hazards arising within the landscape design elements at Land at Fontwell Avenue, Eastergate. The document is prepared in accordance with 'Managing health and safety in construction – Construction (Design and Management) Regulations 2015'.

Any works shall be carried out in accordance with the approved Fabrik drawings and specifications. Good horticultural practice and the current British Standards should be followed with all operatives being trained according to the task to be undertaken. It shall be the contractor's responsibility and liability for any damage to person or property, however caused whilst on site.

Below are the series of landscape drawings (Stage S1-3) that have been prepared to support a planning submission by Reside.

D2776-FAB-00-XX-DR-L-1000	Colour Landscape Masterplan
D2776-FAB-00-XX-PR-L-0002	Fabrik Landscape Input into DAS

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Revisions:

Rev.	Date	Reason for Issue	Prepared by	Issued by
PL01	17.04.2020	ISSUED FOR PLANNING APPROVAL	JN	JN
PL02	30.04.2020	UPDATED RED LINE BOUNDARY – ISSUED FOR PLANNING APPROVAL	JN	JN

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Hazard Reference	CDM001				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Existing trees				
Potential Hazard	Danger from falling limbs both during construction and operation.				
Design Mitigation	All tree works to be carried out according to BS5837 2012 Trees in relation to design, demolition and construction. Recommendations and BS3998 2010 Tree Work-Recommendations. Contractor to comply with Arboricultural Method Statement and reports.				
Residual Risk	Planning	Recommended tree works to be undertaken pre-construction. Adequate tree protection to be installed during the works. A watching brief to be conducted by a qualified arboriculturalist throughout construction is recommended due to excavation in close vicinity to trees			
	Operation	Carry out regular assessments in accordance with BS5837 2012 Trees in Relation to Construction. All tree works to be carried out to BS3998 2010 Tree Work-Recommendations. Continued annual inspection during operation of school and to be included in O and M manual.			

Hazard Reference	CDM002				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Tree removal where required				
Potential Hazard	Potential damage/ killing fauna.				
Design Mitigation	- Trees identified to be removed - Minimised the number of trees required to be removed - Stage 1 habitat survey and ecology report undertaken to identify sensitive areas - Tree survey undertaken to identify species, ages and condition.				
Residual Risk	Planning	A competent and qualified Arboriculture contractor to be appointed to undertake the works			
	Operation	Oversee works and ensure tree protection methods are in place			

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Hazard Reference	CDM003				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Earthworks / Ground works.				
Potential Hazard	Conflict with landscape elements and the proposed services and drainage on site				
Design Mitigation	Drainage information that has been provided to date and planting located to avoid conflicts between planting and trees and known service runs.				
Residual Risk	Planning	- Review of landscape information will be required should service and drainage locations change or be amended. - Where trees are within 3m of a service run root barrier will be identified as part of the detail design stage.			
	Operation	Final location to be agreed and checked on site. Tree planting areas are to be clearly identified, as built record drawings of services required prior to landscape contractor starting on site.			

Hazard Reference	CDM004				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Proposed services and drainage				
Potential Hazard	Conflicts with landscape elements and the proposed services and drainage on site.				
Design Mitigation	Root barriers for trees in close proximity to services				
Residual Risk	Planning	n/a			
	Operation	- Review of proposed drainage and service locations in relation to landscape to be carried out at tender/construction stages. Final location to be agreed and checked on site. Tree planting areas are to be clearly identified, as built record drawings of services required prior to landscape contractor starting on site. - Provide adequate survey information prior to construction.			

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Hazard Reference	CDM005				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Level change across site				
Potential Hazard	Pedestrian movement on gradients. Potential inaccessibility of some areas to some users.				
Design Mitigation	- Final earthworks designed to be no greater than 1 to 3 gradient and with minimum 0.5m wide level area proposed at top of bank (in order to be self-supporting and to allow maintenance operations associated with proposed vegetation) - Planting to create buffer to deter access to the slopes - Landscape has been designed to provide level access across the site. There is flush access into all building thresholds. Refer to Architects drawings for further levels information. Where this is not possible due to site constraints, additional steps and step free routes of maximum 1:21 gradient are provided. - Consideration of Part M and Part K in relation to external stepped and ramped access and changes in level.				
Residual Risk	Planning	Review of landscape information will be required when full building and engineering designs are finalised			
	Operation	Landscape contractor should carry out their own risk assessment and develop appropriate methodology for constructing these areas.			

Hazard Reference	CDM006				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Landscape Materials.				
Potential Hazard	Trips or falls on surfaces.				
Design Mitigation	- The current designs have minimised or eliminated materials with risk of trips or falls. - Landscape has been designed to provide level access across the site. There is flush access into all building thresholds. Refer to Architects drawings for further levels information. Where this is not possible due to site constraints, additional steps and step free routes of maximum 1:21 gradient are provided.				
Residual Risk	Planning	Review of landscape information will be required when full building and engineering designs are finalised			
	Operations	n/a			

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Hazard Reference	CDM007				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Landscape Materials.				
Potential Hazard	Dust and small particles produced from landscape hard materials.				
Design Mitigation	- Materials have been specified to reduce / avoid such materials producing dust that pose risk. Contractor to carry out toolbox talks and provide appropriate equipment at the construction stage. - Cutting required for paving slabs has been minimised as far as possible.				
Residual Risk	Planning	n/a			
	Operations	Method statement for work during construction. Safety measures following audits			

Hazard Reference	CDM008				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Materials / Substances / Components				
Potential Hazard	Manual handling/musculo-skeletal injuries Cuts and abrasions Carcinogenic diseases Respiratory injuries Skin diseases Noise				
Design Mitigation	- Design to allow for mechanical lifting where possible. - Avoid specifying known carcinogenic materials or those likely to cause respiratory/skin problems				
Residual Risk	Planning	n/a			
	Operation	- Method statement to be submitted by landscape contractor - Method statement for work during construction. Safety measures following audits. Tool box presentation to ensure correct manual handling.			

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Hazard Reference	CDM009				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Landscape Materials.				
Potential Hazard	Manual handling / musculoskeletal injuries.				
Design Mitigation	The current designs allow mechanical handling where possible specification will be developed to ensure ease of manual handling. Avoidance of specifying materials over limits allowed for lifting. The locations of the trees are accessible for delivery and handling. Correct machinery (lifting hooks) to be used for handling trees. Ensure method statements are provided at tender stage for heavy lifting.				
Residual Risk	Planning	n/a			
	Operations	Detailed specifications of materials will be specified at this stage to ensure correct manual handling of specific slab sizes. Detailed specifications to be provided. Tool box presentation to ensure correct manual handling.			

Hazard Reference	CDM010				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Hot Work / Handling dangerous materials				
Potential Hazard	Fire/Explosion Dust Fumes/Chemical Splash				
Design Mitigation	- Design minimal hot work elements where possible. - Contractor to ensure correct method statements are produced and presented to operatives.				
Residual Risk	Planning	n/a.			
	Operation	Method statement to be issued by landscape contractor			

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Hazard Reference	CDM011				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Emergency vehicular/pedestrian collisions				
Potential Hazard	Emergency vehicles passing through pedestrian areas. There will be requirement for fire tender access through to the southern area of the site during an emergency.				
Design Mitigation	Vehicular access/egress routes designated and identified by surface materials, edging and management.				
Residual Risk	Planning	Details of construction traffic movement to be agreed and adhered to.			
	Operation	The management company must ensure safety procedures for residents are in place in the case of vehicular emergency access.			

Hazard Reference	CDM012				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Proposed Delivery of Nursery Stock to Site				
Potential Hazard	Transportation and movement of biosecurity plant hazards to site.				
Design Mitigation	Understanding of requirement of biosecurity ahead of operations on site.				
Residual Risk	Planning	n/a			
	Operation	- Inspection and review of the nurseries plant passport. - Inspection and review of the nurseries plant health check policy and procedures. - Inspection and review of the nurseries plant inspection report carried out by the Governments Animal and Plant Health Agency. - Inspection of the first delivery of nursery stock to be carried out. - Landscape contactor is to advise the landscape architect of any future deliveries so that further inspections can be carried out prior to planting.			

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Hazard Reference	CDM013				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Large trees specified for the scheme				
Potential Hazard	Manual handling/musculo-skeletal injuries from lifting of large elements				
Design Mitigation	All proposed trees/plants specified to be lifted using suitable heavy equipment or crane and placed directly into the pits to minimise handling.				
Residual Risk	Planning	- Contractor with experience of installing large trees to be appointed - Contractor to provide safe working method for installation of the trees during construction - Mechanical lifting equipment will be required at all levels to assist with the minor movements required to position trees			
	Operation	Following completion of the construction works, replacement trees will need to be installed using a temporary crane. Method statements will be required for mechanical lifting and separation from the public/students			

Hazard Reference	CDM014				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Tree planting within pedestrian areas				
Potential Hazard	Low branches. Reduced visibility				
Design Mitigation	Most trees are 2m clear stem. Multi stem trees have been placed with consideration to pedestrian paths and visibility splays.				
Residual Risk	Planning	n/a			
	Operation	As trees establish and grow, 2m clear stem will need to be maintained. To be included within Landscape Maintenance and Management Plan			

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Hazard Reference	CDM015				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Plant species				
Potential Hazard	No plants with spikes/thorns specified. Any plants that have spikes, thorns or poisonous will be located away from accessible areas.				
Design Mitigation	- Mild toxicity with very low severity of risk - Species only used within car park or play areas, not used in areas of higher likelihood of exposure.				
Residual Risk	Planning	n/a			
	Operation	n/a			

Hazard Reference	CDM016				
Drawing Reference	D2776-FAB-00-XX-DR-L-1000				
Activity / Element	Landscape mounds, levels and play equipment associated with the LAPs and Natural Play				
Potential Hazard	Falls from height / equipment at lower level.				
Design Mitigation	- Landscape mounds within or around areas of natural play are designed to be no greater than 1 to 3 gradient (in order to be self-supporting and to allow maintenance operations associated with proposed vegetation). - Planting has been designed upon the landscape mounds to reduce the risk of climbing and falling. The height of the mounds has also been restricted to help mitigate injury from falls. - Ground level are designed and raised slightly around location of boulders within the play areas to reduce the risk of falling from height. - Play equipment and required fall space is located away from level changes.				
Residual Risk	Planning	- Consideration to play equipment fall height requirements. - Play space subject to detail design with play specialist. - Method statements for construction of the timber retaining structures to be provided by the contractor during the tender stage.			
	Operation	- Maintenance contractor should carry out their own risk assessment and develop appropriate methodology for maintaining these areas. - Maintenance of slopes to be undertaken by qualified personnel and the correct safe procedures are to be put in place.			

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Note: In accordance with the Construction Design Regulations 2015, a design risk assessment has been undertaken for the elements of work shown on the landscape planning drawings.

Note: The contractor shall ensure that prior to commencement of works, all work shall have in place a full method statement and risk assessment. The contractor shall also ensure that all operatives are correctly inducted and are competent to undertake the work. All temporary works required to undertake the works shall be designed by the contractor. Any special construction sequences are identified on the drawing where required.

Report presented by

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