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Options Appraisal

LDA Design

07 June 2024

WATER LANE PRIMARY SCHOOL

Notice

This document and its contents have been prepared and are intended solely as information for LDA Design and use in relation to options of a 2FE Primary School with Nursery Provision on the Water Lane development.

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This document has 33 pages including the cover.

Document history

Document title: Options Appraisal

Document reference: 1.0

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Initial issue	RR-D/BH	RR-D	NV	NV	24.04.2024
2.0	Revised Issue	RR-D/BH	RR-D	NV	NV	02.05.2024
3.0	Revised Issue	RR-D/BH	RR-D	NV	NV	02.05.2024
4.0	Revised Issue	RR-D/BH	RR-D	NV	NV	03.05.2024
5.0	Final Issue	RR-D/BH	RR-D	NV	NV	24.05.2024
6.0	Final Issue	RR-D/BH	RR-D	NV	NV	31.05.2024
7.0	Final Issue	RR-D/BH	RR-D	NV	NV	07.06.2024

Client signoff

Client	LDA Design
Project	Water Lane Primary School
Job number	5228305

**Client
signature/date**



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Executive Summary

This document has been produced as supporting evidence to the Liveable Water Lane Supplementary Planning Document and tests options for how a school could be bought forward using the existing Haven Banks Car Parks 2 & 3 as the main location for the new primary school building.

This school options study is a means to explore the size and location of the school and has developed a series of options in order to make the best use of land within the central urban context whilst providing high quality education provision. The fundamental design options explored include replacement of soft play with an All-Weather Pitch (AWP), reduced onsite parking with potential for offsite staff parking and roof top play spaces. The options also explore how the school can play an important placemaking role supporting the neighbourhood centre.

Please note that this report was not commissioned by Devon County Council and therefore does not necessarily reflect the Education Authority's position.

This report reflects the four options discussed with LDA Design regarding the viability of a 2FE primary school with nursery provision at Water Lane, Exeter utilising the site of Haven Banks Car Parks 2 and 3.

1. 1.64 Hectare site provision
2. 1.10 Hectare site provision
3. 1.03 Hectare site provision
4. Alternative options

The intention of this report is to provide a summary for each option with assumptions and limitations as well. Each of the drawings are provided in PDF format as part of the Appendix.

Key Assumptions

These options have been prepared using guidance from the following documentation:

1. Department of Education; Output Specification 2021 (December 2023)
2. Building Bulletin 103.
3. Where information or surveys are unavailable, in-house experience has been provided.
4. The school is a 2-form entry primary school with nursery provision to suit 52 pupils.
5. The external area requirements are to suit the school.

Car Parking Provision

The car parking requirement for a school of this scale has been determined by SLR through their calculations, which resulted in 23 bays. The location of the bays varies across the options, and where not shown within the school boundary, it is to be located off site.



The DfE have stated in the Output Specification 2021 guidance that car parking numbers are to be provided by the Local Authority. Note that the DfE site area guidelines account for car parking provision in area and not in bay numbers. This provision resides in the 'non-net' area only.

Water Lane is planned as a low-car neighbourhood and parking numbers may reduce through the design process.

Building Typology

The building form has been retained where possible to support ease of comparison between the options. This has been modified where site constraints impacted the adjacencies between the internal/external learning environments.

Outcomes

The following placemaking and design decisions apply to all four options:

1. Where possible, the build is located with an East-West orientation to maximise daylighting internally.
2. Nursery and associated external play has its own direct access point (to comply with DfE OS21, December 2023).
3. The Main Hall/Activity Studio are located adjacent the AWP (All Weather Pitch) where applicable.
4. The building has been positioned to align with either Water Lane frontage or the neighbourhood centre street frontage which is parallel to the eastern site boundary.
5. Car Parking provision will be located off site (with the exception of one proposal where this is to be located on-site – Option 1)
6. An AWP has been proposed for 3no. options to support reduction in overall site area. The AWP is an alternative to 'Soft Outdoor Play' and is Sport England compliant. It's all year use will also support community use.

Constraints

The following list covers the existing known constraints on the Haven Banks Car Parks 2 and 3 and surrounding areas which impact the proposal. Please note that the proposed school site boundary is restricted due to these constraints with only the eastern boundary providing flexibility of expansion.

Please refer to the 'Constraints and Opportunities' drawing (p18) for further information.

Landscape

1. Existing trees retained with build located at distance to mitigate risk of affecting root protection areas (RPA).
2. Biodiversity Net Gain has not been calculated and will apply.
3. Urban Greening Factor has not been calculate and will apply.

Services

4. Gas Mains – these are located on the Gas Site and not on Haven Banks car parks 2 and 3.
 - a. An easement will be in place to access the mains at all times.
NB. The Gas mains route is subject to change and may not impact the building footprint and associated external areas for the school.
5. Electricity Cables – these are located within the eastern part of Haven Banks Car Parks 2 and 3, as well as the adjoining Gas Site. Survey information is limited and suggests these are low voltage only.
6. Buried Utilities – these are located along the east boundary of Haven Banks Car Parks 2 and 3. There is currently no proposal to divert this.
7. The existing electrical and gas housing located on the Gas Site restrict the north-east boundary of the proposed school site. There is opportunity for these housings to be relocated.
8. There is a level drop from the Car Park to Water Lane which may render access challenging.

Environmental

9. There will be a need for escape across Water Lane during flood and as such an access point may be created off the School Secure Line. This is subject to agreement for safeguarding.
10. Noise and Air pollution – these mainly emanate from the southern rail track which runs towards Marsh Barton station.
11. Flood: The site is located in Flood Risk Zones 2 and 3. Please refer to the Appendix for Environment Agency considerations. Note that these have not been incorporated into the current proposals due to the level of design detail required.
12. A notional 5m wide strip has been allowed for flood egress on the western boundary of Haven banks Car Parks 2 and 3 (offset to outside of the site). There is an assumption that this zone could be used for bunding.

Legal

13. Easement – there is an existing easement off the Boatyard car park into Haven Banks Car Parks 2 and 3. It is proposed/assumed that this will be omitted.
14. Access – Michael Browning Way is used by the Boatyard and Industrial units to access the build as well as private car parks. Should the School require access, there is a risk of congestion at peak times (start/close of school day).

1. Option 1: 1.64 Hectares



Key Summary

- ✓ Uses the DfE site area guidelines of 1.64 Hectares.
- ✓ All area requirements located within school boundary.
- ✓ Aligns with the Neighbourhood Centre frontage.
- × Car park at distance from building
- × BB103 compliant Hard Outdoor PE area with 2no. medium courts

Area Use

- Existing Haven Bank Car Parks 2 and 3
- A portion of the Gas Site

Access

- Pedestrians/visitors and building users access the school off the eastern boundary.
- Pupil access is available off Water Lane or the eastern boundary.
- Vehicular users will access the site through a gate off Michael Browning Way via the new car park. Accessible bays will be off the Neighbourhood Centre.
- Refuse collection and delivery bays will be off Neighbourhood Centre side.
- Dedicated Nursery access is off Water Lane.
- Community access available off the eastern boundary.

External Areas

- Grass pitches have been provided offering Sport England compliant pitches to suit U11/12.
- 2no. compliant medium sized multi-use games courts have been provided.
- Dedicated Nursery external provision secured through internal fencing.

2. Option 2: 1.10 Hectares



Key Summary

- ✓ Access to the school by foot is through the Hard Outdoor PE area off the Neighbourhood Centre with secondary access for vehicles through Michael Browning Way.
- × All area requirements are not located within school boundary.
- × Does not align with the Neighbourhood Centre frontage (east boundary)
- × Does not comply with the DfE site area guidelines of 1.64 Hectares.
- × Car park at distance from building

Area Use

The Site Area equates to 1.10 Hectares which is a 0.54 Hectare reduction from the DfE guidelines. The reduction has been based on the following:

- Car Parking provision will be located off site with limited accessible bays provided on-site.

- The AWP has been used which is 50% of the External Playing field area.

The school boundary is based on using the following areas:

- Existing Haven Banks Car Parks 2 and 3.
- A portion of the Gas Site.

Access

- Pedestrians/visitors and building users access the school off Water Lane.
- Pupil access is available off the Hard Outdoor area.
- Vehicular users will access the site through a gate off Michael Browning Way.
- Accessible bays have been retained off Michael Browning Way.
- Refuse collection and deliveries to be off Michael Browning Way.
- Dedicated Nursery access is via Michael Browning Way.
- Community access available off Water Lane.

External Areas

- An All-Weather Pitch has been provided offering an all-year use Sport England compliant area to suit U11/12.
- BB103 minimum area guidelines for Hard Outdoor PE provided with 1no. medium sized multi use games court.
- Dedicated Nursery external provision secured through internal fencing.

3. Option 3: 1.03 Hectares



Key Summary

- ✓ Water Lane is used as the street frontage for access by foot and vehicles with secondary access through Michael Browning Way.
- ✓ Rooftop Hard Play achieved. Cost implications unknown.
- × All area requirements are not located within school boundary.
- × Does not align with the Neighbourhood Centre frontage (east boundary)
- × Does not comply with the DfE site area guidelines of 1.64 Hectares.
- × BB103 Hard Outdoor PE minimum area is compliant but court size area is insufficient.
- × Car park at distance from building

Area Use

The Site Area equates to 1.03 Hectares which is a 0.61 Hectare reduction from the DfE guidelines. The reduction has been based on the following:

- Car Parking provision will be located off site with limited accessible bays provided on-site.
- The AWP has been used which is 50% of the External Playing field area.
- Rooftop Play omits the need for ground level area for Hard Play.

The school boundary is based on using the following areas:

- Existing Haven Bank Car Parks 2 and 3.
- A portion of the Gas Site.

Access

- Pedestrians/visitors and building users access the school off Water Lane.
- Pupil access is available off Water Lane or through Michael Browning Way.
- Vehicular users will access the site through a gate off Michael Browning Way.
- Accessible bays have been retained off Michael Browning Way.
- Refuse collection and deliveries to be off Michael Browning Way.
- Dedicated Nursery access is via Michael Browning Way.
- Community access available off Water Lane.

External Areas

- An All-Weather Pitch has been provided offering an all-year use Sport England compliant area to suit U11/12.
- BB103 minimum area guidelines for Hard Outdoor PE.
- Dedicated Nursery external provision secured through internal fencing.

The school boundary is based on using the following areas:

- Existing Haven Bank Car Parks 2 and 3.
- A portion of the Gas Site.

Access

- Pedestrians/visitors and building users access the school off the eastern boundary.
- Vehicular users will access the site through a gate off Michael Browning Way.
- Existing accessible bays have been retained off Michael Browning Way to be used by visitors (if required).
- 2no. new accessible bays provided at the eastern boundary.
- Refuse collection and deliveries to be off the eastern boundary.
- Dedicated Nursery access is off Water Lane.
- Community access available off the eastern boundary.

External Areas

- An All-Weather Pitch has been provided offering an all-year use Sport England compliant area to suit U11/12.
- BB103 minimum area guidelines for Hard Outdoor PE provided with 1no. medium sized multi use games court.
- Dedicated Nursery external provision secured through internal fencing.
- Habitat area is narrow and may preclude certain activities.
- Maximum use of the external area is low as some corridors or space remain unusable.

4.1 Alternative Solutions

The below sketches offer alternative arrangements to optimise the arrangement of the building and associated external areas to create a strong association with the Neighbourhood Centre frontage. These sit within the DfE target of 1.64 hectares.



Appendix A.

A.1 Environment Agency

High Level Summary

'The entire site is within flood zone 3a – high probability, but the site is on an area of slightly raised land (along with the gas site) so is surrounded by higher flood risks/hazard i.e. Water Lane/Harbour

The flood risk within the site during the design flood (inc. climate change) are between 0.3-0.6m deep and at a level of 8.4mAOD, and have a range of flood hazards - low, medium and significant, which indicates a flood conveyance route through the site. Medium risks are a concern to the elderly and children.

The school will need to set floor levels ideally above the flood level (so at 8.7mAOD), be linked into the proposed safe access and egress route and have a second storey to act as a safe refuge. The infrastructure facilities, i.e. plant, water, electrical equipment etc would have to be at or above the 8.7mAOD level, regardless of the school ground floor level. The outdoor spaces/entrances can be at the current site levels.

The design of the school will need to consider the impacts it may have on the major flood conveyance route along Water Lane (if any), the smaller route through the site and how by linking to the safe access and egress route these conveyance routes do not make flood risk worse for third parties. These conveyance routes may also determine the origination of the buildings, i.e. north/south may not be feasible, as early indicates for the Water Lane regeneration site, show a similar problem, with building perpendicular to the flow routes causing design issues. The position of the flow routes can be changed but must not increase risk to third parties.'

Points of Clarification

'The safe refuges do not have to be linked to the Safe A&E route – the refuge is in case you can't evacuate, so the school has somewhere to be safe – ECC/DCC emergency planners will have to say whether the space available (in an emergency) is acceptable or not.

The value of 8.7mAOD, is made up of the flood level of 8.4 + 0.3m freeboard – Given that the site is not flat or at the same level, plus any future landscaping requirements, we can't say it has to be Xm above existing site levels. The FFL must be at 8.7mAOD or higher at this site – another site will have a different flood level, but we would then need to add on 0.3m freeboard to set a minimum FFL.'

Appendix B.

B.1 Constraints and Opportunities

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

MAINTENANCE/CLEANING

DECOMMISSIONING/DEMOLITION

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

References
Model Name

Rev.	Date	Description	By	Chk'd	App'd

Note:
The services illustrated are based on limited information received.
Buried services are based on historic information which will require an on-site survey. Covenants are in place for access to the gas mains and will require consultation with the Gas Authority.

Rev.	Date	Description	By	Chk'd	App'd

Drawing Suitability	Feasibility	Status	S1
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Project Title
Water Lane - Proposed School Feasibility Study

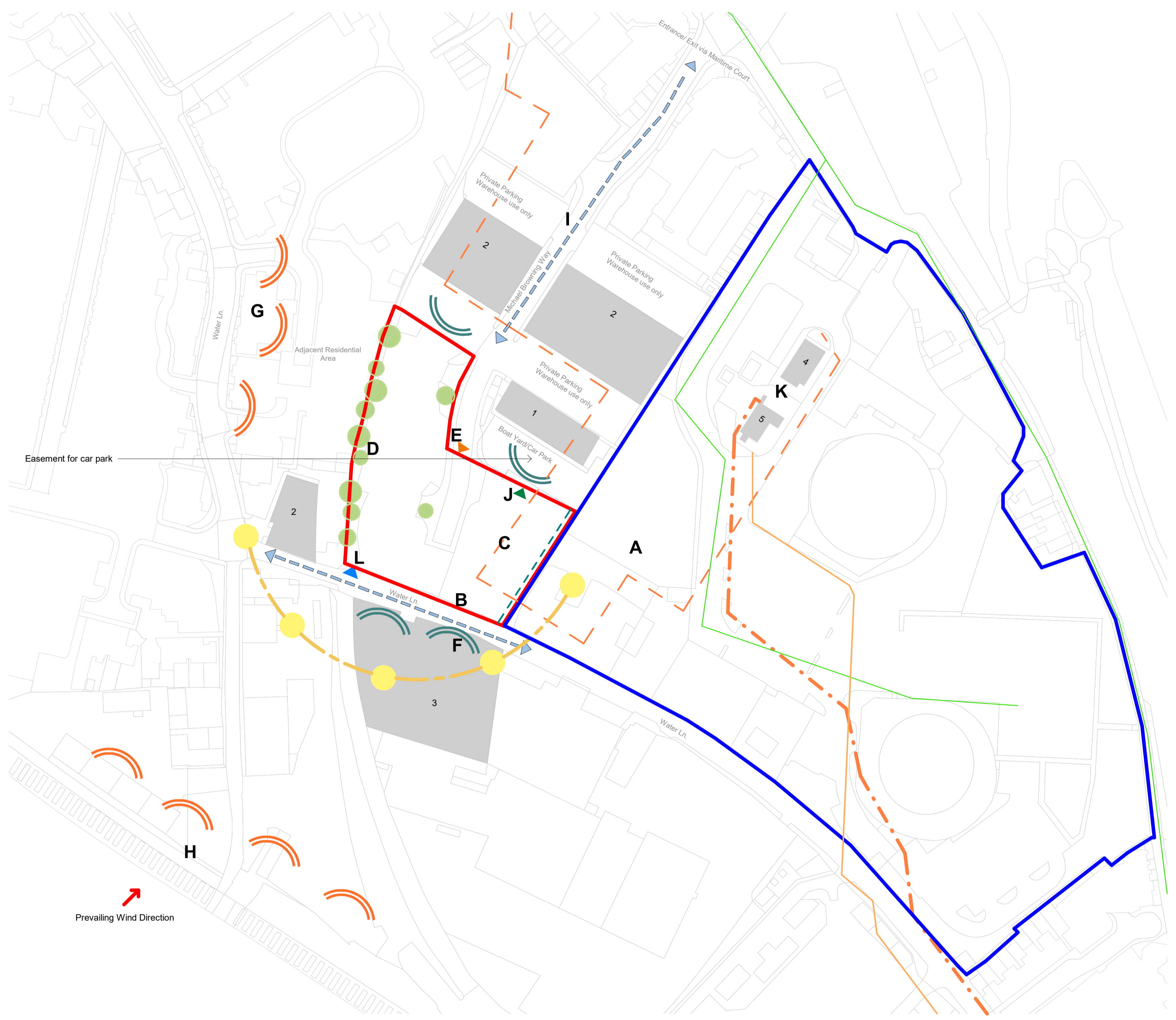
Drawing Title
CONSTRAINTS & OPPORTUNITIES PLAN

Scale	Designed	Drawn	Checked	Authorised
As indicated	RR	BH	RR	NV
Original Size	Date	Date	Date	Date
A1	24/04/24	24/04/24	24/04/24	24/04/24
Drawing Number	5228305-ATK-0002			Revision
				P06

- A.** Gas mains intersect the former gas works adjacent to the site. Although it doesn't cross the site boundary it may create issue when looking to expand to the East.
- B.** An approx 4m high stone wall runs along the site perimeter bordering Water lane with only a small opening for pedestrian access. This may require demolition if new access routes are preferred.
- C.** Low voltage power cables run through the site. Care must be taken when excavating.
- D.** Trees line the North Western perimeter of the site. An arboricultural survey is required to identify the classification of each tree and their RPAs.
- E.** Low lying masonry walls, galvanised steel mesh fences and raised planters dissect the existing car park. These will have to be demolished prior to commencement of works.
- F.** Noise pollution from neighbouring industrial properties.
- G.** Traffic noise concentrated to the east of the site.
- H.** The rail network south of the site will cause intermittent disruption from train noise.
- I.** Main access road passes between commercial property.
- J.** Yard behind Boat Shed is accessed from the proposed site. Right of access is to be confirmed.
- K.** Gas mains and 11kw electric cables terminate here at existing housing and sub station.
- L.** There is a level drop from the Car Park to Water Lane which may render access challenging.

EXISTING BUILDINGS

- 1. Boat Shed
- 2. Commercial warehouses
- 3. Working garage
- 4. Electricity substation
- 5. Gas housing



KEY		BOUNDARY KEY	
	High Pressure Gas Mains		Primary Pedestrian Entry/ Exit (to Water Lane)
	Medium Pressure Gas Mains		Existing Vehicular Entry/Exit
	Sun Path		Vehicular entrance into Boat Shed yard
	11kw Electrical Cables		Industrial noise from neighbouring properties
	Primary Traffic Routes		Traffic noise from road and rail
	Buried Services		
	Existing Openreach Cable Duct		
	Tree Outline		

Appendix C.

C.1 Land Ownership Drawings



Appendix D.

D.1 Drawn Options

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

MAINTENANCE/CLEANING

DECOMMISSIONING/DEMOLITION

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

References

Rev.	Model Name

Proposal is based on desktop survey information and requires on-site surveys, land ownership agreements and Council agreement to enable use of existing car park.

Intrusive surveys required to validate proposal.

Building location is indicative only

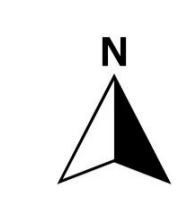
NOTE 1:

Existing gas housing and sub station prevent further expansion.

Rev.	Date	Description	By	CHK'd	App'd
P08	07/06/24	Final Issue	BH	RR	NV
P07	31/05/24	Final Issue	BH	RR	NV
P06	24/05/24	Final Issue	BH	RR	NV
P05	03/05/24	Revised Issue	BH	RR	NV
P04	02/05/24	Revised Issue	BH	RR	NV
P03	02/05/24	Revised Issue	BH	RR	NV
P02	24/04/24	Initial Issue	BH	RR	NV
P01	15/04/2024	WIP Issue	BH	RR	NV

Rev.	Date	Description	By	CHK'd	App'd

Drawing Suitability Status



New Build - Concept Option 01		
	Description	
New Build (1-storey)	Nursery + Activity Studio + Assembly Hall	
New Build (2-storey)	Infants + Junior blocks	
TOTAL GIFA		2312m²

External Areas - Concept Option 01		
	Description	Area
Hard Informal Social Areas	Car Park 2+3	900m ²
Hard Outdoor PE	Car Park 2+3	1525m ²
Habitat	Car Park 2+3	625m ²
Soft Informal and Social Areas	Car Park 2+3	1705m ²
Soft Outdoor PE	On Gas Site	8495m ²
Non-Net	On Car Park 2+3 (21 bays & 2no. accessible bays)	287.5m ²
TOTAL GIFA (excludes paths and 'float' area)		13,537.5m²

	Car Park 2+3	Gas Site
TOTAL Site Area (Build + Total External area)	1.64 H	1.09 H
TOTAL DfE Site Area guidelines	1.64 H	

Key

- School Site Boundary
- Buried Services
- Safeguarding School Boundary (fence line)
- ▲ Main Entrance for Staff/Visitors
- ▲ Pupil Access
- ▲ Community Access (Controlled)
- ▲ Pedestrian Access
- ▲ Vehicular Access
- ↔ Key External Connections
- Flooding egress (no-build zone)
- Allocated Staff Parking Spaces
- Allocated Visitor Parking Spaces/Acc Bays

External Areas Legend

- Soft Outdoor PE
- Hard Outdoor PE
- Soft Informal and Social Areas
- Hard Informal and Social Areas
- Habitat Areas

Internal Areas Legend

- 2-storey space
- 1-storey space



Site Area
16,400sqm

100
Millimetres
0 10

DO NOT SCALE

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

MAINTENANCE/CLEANING

DECOMMISSIONING/DEMOLITION

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

References

Rev.	Model Name

Proposal is based on desktop survey information and requires on-site surveys, land ownership agreements and Council agreement to enable use of existing car park.

Intrusive surveys required to validate proposal.

Building location is indicative only

NOTE 1:

Existing gas housing and sub station prevent further expansion.

NOTE 2:

Car parking is to be located off-site and contained within future developments.

Refer to SLR report for parking bay requirements and calculations.

Provision shown (where applicable) is based on accessible bays only and does not equate to the full required total.

Rev.	Date	Description	By	Chk'd	App'd

Rev.	Date	Description	By	Chk'd	App'd
P07	07/06/24	Final Issue	BH	RR	NV
P06	31/05/24	Final Issue	BH	RR	NV
P05	24/05/24	Final Issue	BH	RR	NV
P04	03/05/24	Revised Issue	BH	RR	NV
P03	02/05/24	Revised Issue	BH	RR	NV
P02	02/05/24	Revised Issue	BH	RR	NV
P01	24/04/24	Initial Issue	BH	RR	NV

Rev.	Date	Description	By	Chk'd	App'd

Drawing Suitability	Status

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LDĀDESIGN

Project Title
Water Lane - Proposed School Feasibility Study

Drawing Title
CONCEPT DEVELOPMENT OPTION 04

Scale	Designed	Drawn	Checked	Authorised
1 : 500	RR	BH	RR	NV
Original Size	Date	Date	Date	Date
A1	24/04/24	24/04/24	24/04/24	24/04/24
Drawing Number	Revision			
5228305-ATK-01-XX-D-A-0006	P07			

New Build - Concept Option 04		
	Description	
New Build (1-storey)	Nursery + Activity Studio + Assembly Hall	
New Build (2-storey)	Infants + Junior blocks	
TOTAL GIFA	1273.5 m² (footprint)	2312m²

External Areas - Concept Option 04		
	Description	Area
Hard Informal Social Areas	Car Park 2+3	832m ²
Hard Outdoor PE	Car Park 2+3 Gas Site	1525m ²
Habitat	Car Park 2+3	625m ²
Soft Informal and Social Areas	Car Park 2+3	1705m ²
Soft Outdoor PE	On Gas Site (Reduced by 50% as All-weather pitch proposed)	4247m ² (8495m ²)
Non-Net	Retained 3no. accessible bays and 2no. new accessible bays Refer to note 2 for remainder of parking area	62.5m ²
TOTAL GIFA (excludes paths and 'float' area)		8996.5m²

	Car Park 2+3	Gas Site
TOTAL Site Area (Build + Total External area)	1.20 H	0.55 H
TOTAL DfE Site Area guidelines	1.64 H	

Key

- School Site Boundary
- Buried Services
- Safeguarding School Boundary (fence line)
- Main Entrance for Staff/Visitors
- Pupil Access
- Community Access (Controlled)
- Pedestrian Access
- Vehicular Access
- Key External Connections
- Flooding egress (no-build zone)
- Allocated Staff Parking Spaces
- Allocated Visitor Parking Spaces/Acc Bays

External Areas Legend

- Soft Outdoor PE
- Hard Outdoor PE
- Soft Informal and Social Areas
- Hard Informal and Social Areas
- Habitat Areas

Internal Areas Legend

- 2-storey space
- 1-storey space



Enhance hedegrow to mitigate risk of visual link

See note 1

Site Area
12,044 sqm

Disabled / Visitor Parking

Appendix E. Precedent Studies



Roof top play at Kings Cross Academy and Frank Barnes School
David Morley Architects



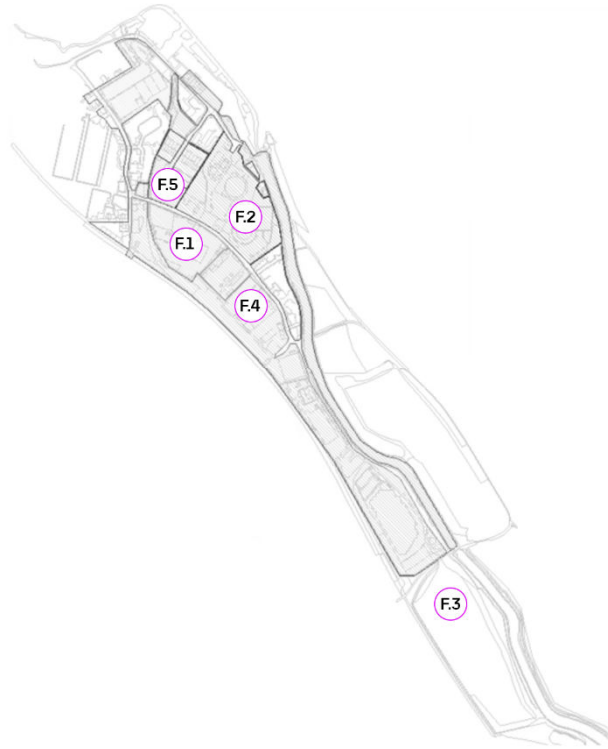
Well integrated landscaped environment at St. Mary's Catholic Voluntary School
Hawkins Brown, The Department of Education





Multi storey school with roof top play at St. Mary Magdalene Academy
Feilden Clegg and Bradley

Appendix F. Initial Site Options



The following options summarise the possible locations for the new primary school at Water Lane were initially explored by LDA Design and Exeter City Council.

F.1 Vulcan Works site

Opportunities

- Regular site boundaries mean there is flexibility in school layout.
- Vehicle access can be provided from Water Lane or the newly proposed Foundry Lane depending on the access strategy for the wider area.

Challenges

- Uncertainty if Vulcan works available for redevelopment.
- Potentially higher flood risk (confirmation with EA required).
- Contaminated land.
- Rail track noise and air pollution.
- Adjacent to large electrical substation.
- Water Lane currently has poor provision for active travel with no continuous pavements.

Summary

Water Lane (the street) and the electrical substation currently provide a poor environment for a school. The nature of Water Lane will change to become an important active travel route which could support walking and wheeling to school and

improve connections to the new Neighbourhood Centre to the north. The electrical substation is likely to remain a constraint in the medium term.

F.2 Gas Site

Base Summary

- Former Gas Works site.

Opportunities

- Opportunity to occupy prime canal frontage.
- Existing trees can be enhanced to contribute to BNG target.
- Potential to use existing trees to support 'forest school' concept.
- Potentially lower flood risk compared to other sites due to raised ground confirmation with EA required).

Challenges

- Reduces northeast-southwest connectivity through the centre of the site.
- High pressure gas main currently proposed to be removed, but pressure reduction system proposed within southeastern corner of the site.
- Contaminated land.
- School site would occupy approx. 27-38% of the gas site.
- Adjacent to large electrical substation.
- Vehicle access is from Water Lane via the gas site.
- Buried gas network will deter location of school until rerouting has been confirmed.

Summary

A school on the gas site would be close to the Neighbourhood Centre. It would support uses in the centre and active travel. However, it will also occupy prime development land close to the Canal, which may be under pressure for other uses. It may reduce permeability through the site between the Canal and Water Lane. A school would need to coordinate with proposed and existing electrical and gas infrastructure.

F.3 Grace Road Fields Site

Opportunities

- Opportunity for larger school site with fewer land pressures.
- Land under ownership of ECC.
- Allows for greater use of external area facilities for community use.
- Potential for Forest School and opportunity for DfE Pilot Biophilic design.

Challenges

- At distance from the Neighbourhood Centre in the Water Lane SPD.
- Distance from Water Lane residential development may reduce attractiveness of active travel.

- Restricted vehicle access across Clapperbrook Bridge.
- Potential Flood Risk which needs confirming with EA.
- Proximity to the Energy form Waste centre.

Summary

An option for a split school site across Grace Road Fields and Haven Banks 2 and 3 car parks was explored, whereby Grace Road Fields would be used for external areas only. However, Grace Road Fields is 1.5km away from the car parks, increasing need for use of mini buses which is non-viable for the day to day running of a school.

The use of Grace Road Fields for the full school was also considered. However, the school would therefore be at a distance from the Neighbourhood Centre. As such, there would likely be fewer journeys made by active travel and increased strain on existing limited road infrastructure undermining the low car vision for Water Lane. The remote site would also not support uses and activity in the centre of the neighbourhood.

F.4 Water Lane Development Management Company Land

Opportunities

- Regular site boundaries mean there is flexibility in school layout.
- Vehicle access can be provided from Water Lane or the newly proposed Foundry Lane depending on the access strategy for the wider area.

Challenges

- Potentially higher flood risk (confirmation with EA required).
- Contaminated land.
- Rail track noise and air pollution.
- Adjacent to large electrical substation.
- Water Lane currently has poor provision for active travel with no continuous Pavements.
- At a distance from the Neighbourhood Centre.

Summary

Water Lane and the electrical substation currently provide a poor environment for a school. The nature of Water Lane may change to become an important active travel route which could support walking and wheeling to school and improve connections to the new Neighbourhood Centre. However, the Neighbourhood Centre remains 200-300m to the north. The electrical substation is likely to remain a constraint in the medium term.

F.5 Haven Banks Car Parks 2 and 3

Opportunities

- Sits in line with the Neighbourhood Centre of the Design Code of the Water Lane SPD.
- Refer to School Specific Commentary.
- Utilises ECC land.

Challenges

- Buried services through the site reduce possible locations of the new school.
- Flood risk as per EA commentary in Appendix A.
- Access to the site is limited to north and east (if provided new) due to a substantial drop in height between the site and Water Lane to the South.
- Covenants in place for adjacent site.
- Existing access requirements straddle eastern boundary which implies a no-build zone.
- Additional land on the adjacent gas site would be required to achieve minimum functional site area.
- Parking facilities for staff may be at distance and would need to be resolved.

Summary

The site location was explored as it sits comfortably within the Development Framework of the Water Lane SPD. However, this report explores alternative solutions such as proposed by the DfE in OS21, for example the use of MUGAs and/or rooftop play. These have proven success in dense urban environments.

Active travel can be encouraged well on this site as it plays a central role within the Water Lane SPD. This reduces the need for an increase in use of vehicles and potentially public transportation. Please refer to SLR report: *Liveable Water Lane Supplementary Planning Document – Transport & Mobility Technical Note* for further detail.

Appendix G.

G.1 Coordinating with the development framework

The below information has been prepared by LDA Design.

Diagrams illustrating potential alternative school location options coordinated with the Development Framework within the Liveable Water Lane Supplementary Planning Document.

The options show the preferred close relationship between the school and Neighbourhood Centre.



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