

## Section 1 - Risk Register

Ref	Category	Risk Description	Impact	Chance	Cost	Time	Risk Index	RAG	Mitigation
3	Planning	Failure to discharge planning and listed building conditions		2	1	1	2	Green	Design team and contractor to collate initial pack of information for discharge of conditions
4	Planning	Planning conditions impact on budget	Increase project budget	4	3	4	14	Red	Extent of conditions known and to be reviewed and managed
10	Legislation	Stats Electricity provider	Works to provide new supply are delayed / not in accordance with the programme to save having to provide a sub-station.	2	2	2	4	Green	Orders for the electrical services have been placed by CYC direct.
11	Legislation	Building Control Sign Off delay due to lack of resources	Revisit design to address concerns of building control	2	2	2	4	Green	Continue liaison with the BC Officer
12	Adjoining Owners	Impact of boat companies (City Cruises)	Impact delivery/ site servicing strategy.	2	1	1	2	Green	Legal agreements are in place
13	Adjoining Owners	Party wall negotiations & construction access	Objection from neighbours. Potential delay to programme	3	4	3	10.5	Amber	Appoint party wall surveyor and progress discussions with neighbouring parties
14	Procurement	Failure to secure market interest for restaurant	Restaurant not achieving appropriate tenant and long term revenue projections. Impact on project cost.	3	5	5	15	Red	Early engagement of agent for potential lettings. Sufficient expressions of interest
16	Procurement	Increased construction costs	Exchange rate on materials. Impact of international markets following political decisions.	3	3	3	9	Amber	Tender prices received and under review - Risk shall remain prominent where budget costs / provisional sums are included.
18	Procurement	Sub-contractor insolvency	Impacts Main Contractor	4	3	3	12	Amber	Contractor financial checks and subcontractor vetting to be carried out
20	Surveys	Surveys required to determine ground conditions/ contamination	Possible need to re-visit design / deal with contamination on site.	1	5	1	3	Green	GI survey undertaken, information obtained. Contamination results received. - Desk study provided by Arup
21	Surveys	Identification of active movement	Proven to be active, remediation impacts cost	1	5	5	5	Green	Ongoing monitoring by ARUP and Monitoring specification included within Contract documents for Contractor to follow.
22	Surveys	Unidentified archaeology	Further evaluation required. Cost impact	2	2	2	4	Green	Evaluation of site undertaken.
23	Surveys	Additional surveys required	Cost impact	1	1	1	1	Green	Undertake outstanding surveys
26	Programme	Unrealistic programme submitted by contractor		1	3	2	2.5	Green	Market tested
27	Programme	Programme delays; due to flood levels impacting construction	Works stop, cost and programme implications	6	5	3	24	Red	Review historic flood data, and issue to Contractor. Contingency plan to be developed.
29	Design	Delay to design programme	Client/ Contractor impact cost/ programme	3	3	3	9	Amber	Implementation of IRS schedules, design deliverables and clear responsibility for design
31	Design	Underpinning, piling and crack repairs to be considered	May resolve existing cracks and movement of the tower but other cracks may appear elsewhere that will require repairing.	3	5	5	15	Red	Detailed dilapidations surveys, crack monitors

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32	Design	Discovering structural unknowns	Costs of additional surveys and remediation works.	5	4	3	17.5	Red	Undertake surveys early to determine unknowns. Allow suitable contingency for remediation. Biggest concerns being the tower underpinning and South Range
35	Services	Undetected services not identified on surveys and drawings	Programme/ re-design/ cost impact to address unknown	2	3	3	6	Green	Utilities surveys maps obtained and plotted on SGA drawings. Careful excavation / groundworks when on site.
40	Services	River source heat pump license approval by the Environment Agency; Refused	Delay in no approval from EA	1	4	5	4.5	Green	Provisional consent obtained. Continued dialogue required.
41	Materials	Sourcing stone for the purpose of remediation/ repair works	Quarry that stone exists from is closed. Impacts programme, and different stone requires further approval from Historic England and the planning authority	4	3	3	12	Amber	Investigate other quarries which supply the stone. Liaise with Historic England and the planning authority to have an alternative approved.
42	Construction	Structural damage and the repairs required to the tower	Finding the right solution to undertake the underpinning works	4	4	3	14	Red	Bullivants / Arup design and Vinci temporary works design to be reviewed in detail to mitigate any consequential delay.  Building monitoring systems and locations to be agreed.
48	Post contract	Outstanding defects remaining unresolved	CYC left with legacy issues and building defects which need resolving / impact on tenant occupation / satisfaction.	2	3	1	4	Green	Ability to resolve within the building contract. Use of retention.
50	Financial	Costs exceeds allocated budget (Non Construction costs)	Particular risks surrounding consultant fees, furniture / fit out works etc.	5	3	3	15	Red	Review the non construction costs prior to contract award and during the construction period.
51	Financial	Incorrect estimation, design errors and ambiguities	Construction cost overrun	3	3	3	9	Amber	Risk sits with CYC with the exception of CDP items
56	Construction	Availability of specialist labour / equipment	Change in specification / need to appoint specialists / commission bespoke works	3	3	3	9	Amber	Dialogue with main contractor & supply chain
61	Design	Poor co-ordination with design team interfaces (contractor design portions)		2	3	3	6	Green	CDP requirements have reduced from initial intent - Regular meetings to be held with Vinci and Design Team to discuss CDP interfaces.
62	Adjoining Owners	Rights of Light		1	4	1	2.5	Green	Title Report does not identify any issues
64	Construction	Poor contractor performance during construction		2	5	4	9	Amber	Contract to be signed to protect client - performance bonds to be obtained.
66	Design	Unknown South Range structures	Risk of discovering old basement causing issues with piling proposals	4	3	3	12	Amber	
67	Design	Insufficient design detail from specialist CDP packages / slow to provide required detail	Impacts the sign off planning conditions / listed building consents etc. In particular pre-commencement conditions	3	1	3	6	Green	Regular design and planning condition reviews
70	River	Satisfying EA requirements	Incident occurring which stops the work and action required to resolve the issue. EA Prohibition.	1	5	4	4.5	Green	Waste management and compliance with the EA to ensure no environmental hazards

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72	Design	Delay to design programme as a result of tenant/operator requirements (restaurant)	Operator changes impacting on cost / programme	3	3	3	9	Amber	Recovery of cost / time included within the Agreements for Lease should late or significant changes be made
73	Financial	Design changes (including client changes/ variations / EOT & loss & expense claims) and unforeseen items	Construction cost overrun	6	5	5	30	Red	Traditional contract - risk remains with CYC - Adequate contingency to be secured
75	Construction	Weather delays	Delay to programme - Wind, Temp, Rain	5	3	2	12.5	Amber	Contractor to provide impact through contract mechanisms
76	Design	Underpinning, piling and crack repairs to be considered to 3rd parties	Cracks may appear elsewhere. Remediation costs	2	5	5	10	Amber	Detailed dilapidations surveys, crack monitors Additional bore hole surveys indertaken, no foundatons / obstructions found albeit at relatively shallow depth. (near tower)
77	Surveys	Ground conditions - Borehole survey depth insufficient	Proposed piling designs impacted by this and require altering - Time & Cost impact	3	3	3	9	Amber	Bullivants / Arup to review surveys and confirm they are happy with findings.  Vinci to design piling to new structures and confirm site information held is adequate.
80	Design	Instability to boundary wall following demolition of garages	Structural works required (piers)	3	2	2	6	Green	Assessment of wall structure required - Scope of works to be determined
81	Surveys	Clashes between the existing building foundations and proposed drainage network. No information is available for the existing buildings therefore it has not been possible to co-ordinate the height of drainage to pass above/ under the existing foundation as required.	Co-ordination of drainage with foundations during construction. Cost impact.	3	2	3	7.5	Green	Trial holes could be undertaken to better understand the existing foundations. Drainage has been designed conservatively to allow for a level of contingency in the design if foundations impact drainage runs.
82	Surveys	Potential drainage clash with proposed lift shaft pits	Additional external drainage network	1	3	3	3	Green	Trial hole dug in the location and appears to be clear - risk to be reviewed again once demoliton of north annex is complete.
83	Financial	Billing omissions or Inaccuracies	Missing information within the BoQ resulting in time and cost increases	4	5	4	18	Red	T&T have carried out reviews of the BoQ
84	Financial	Additional works not covered by contract documents. Arising from opening up works / scope and extent of works greater than assumed etc.	Cost & programme	6	5	4	27	Red	Detailed change management process to be followed.
85	Design	Ongoing movement in the south range, given the removal of underpinning from the scheme	Underpinning works reinstated resulting in cost and time impact	2	4	4	8	Amber	Arup to monitor during construction works
87	Design	Design change due to level of development and coordination at the point of tender, for items such as North Annex chimney, retaining walls and stairs, and movement joints to existing structures	Impact on cost and programme - changes may delay construction activity / impact on sequencing resulting in EOT claims	2	2	3	5	Green	Coordination to be managed by design team as a priority - Design changes to retaining concrete wall has been instructed by CYC and should be underway by design team.
88	Design	Council chamber cooling to be approved	Revisit of design proposals - time and cost	2	3	3	6	Green	Design team to disucss with planning / conservation