Wokingham Borough Council

THAMES VALLEY PARK & RIDE SITE

Monitoring and Evaluation One Year After Opening “Lite” Report

JULY 2022

PUBLIC

Wokingham Borough Council

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1 INTRODUCTION

1.1 THE SCHEME

1.1.1. The Thames Valley Park (TVP) Park and Ride scheme aimed to provide additional car parking spaces and an alternative travel choice for Wokingham residents to access Reading town centre by the A4 London Road. The site was originally planned to be served by an existing shuttle bus service provided by TVP between the business park and Reading town centre.

1.1.2. The Park and Ride (the scheme) was to comprise of the following:

- 277 parking spaces
- two park and ride bus stops for 12m long single decker buses
- motorcycle and cycle parking
- bus shelter facilities

1.2 SCHEME LOCATION

1.2.1. The location of the scheme is a 1.35 ha triangular, wedge shaped section of land (shown in red in Figure 1-1 below) in Wokingham Borough, 2km east of Reading town centre and south of the River Thames and west of TVP.

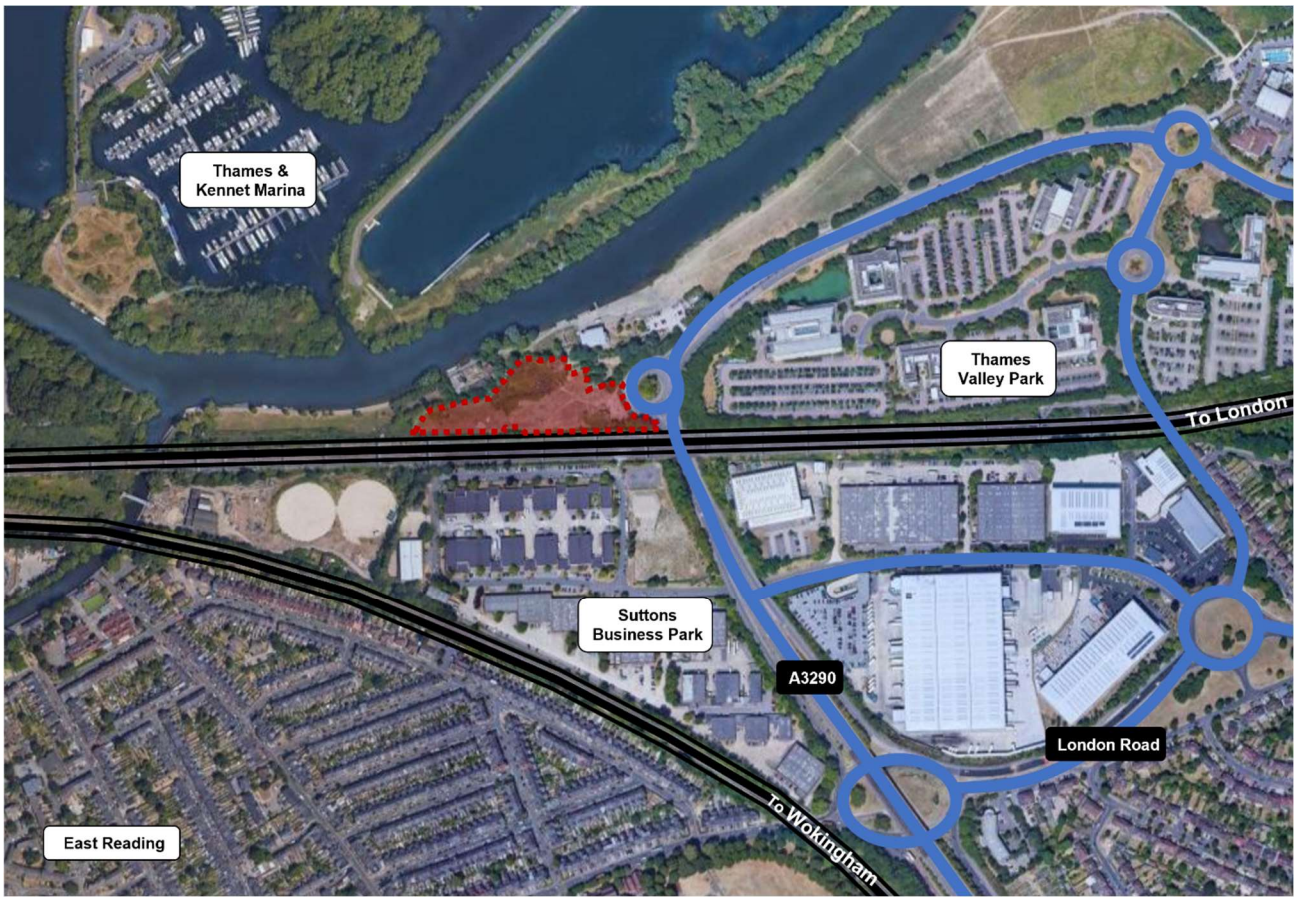


Figure 1-1: Scheme Location

1.2.2. The A3290, which becomes the A329(M) at Winnersh to the southeast, can be accessed via the TVP access roundabout. The A329(M) provides access to Junction 10 of the M4, approximately 7km to the southeast of the site. The A4 corridor between central Reading, TVP and areas in the east such as Twyford and Maidenhead, is located 0.5km to the south of the site, via the A3290. Wokingham is a major employment centre within the southeast, comprising the two major business parks of Thames Valley Park and Winnersh Triangle, which are home to large international companies, including Microsoft, Oracle, Jacobs and BG Group. Central Reading is also a key employment destination and has a growing number of large companies including HSBC, Barclays, Thames Water and Yell.

1.3 NEED FOR THE SCHEME

1.3.1. The scheme was identified by Wokingham Borough Council (WBC) as a measure to help reduce congestion on the A4 corridor, and central Reading. The A4 corridor supports 75,000 people movements per day and in 2014 experienced average daily traffic flows of approximately 22,500 vehicles. The route is heavily constrained and subject to frequent congestion and a reduction in traffic levels at peak times was required.

1.3.2. Without the introduction of the measures proposed by the Full Business Case (FBC), congestion along the A4 was understood to have remained high at peak periods and become intensified by future traffic growth from Strategic Development Locations and employment areas. The scheme was identified in the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) Implementation Plan as a result of its potential contribution to 'enhancing urban connectivity.'

1.4 PURPOSE

1.4.1. This document is the '*Monitoring and Evaluation One Year After Opening "Lite" Report*' for the scheme after it was completed in March 2021 and opened to the public as a car park in June 2021[1].

1.5 REPORT STRUCTURE

1.5.1. Following the introduction, the structure of this report includes the following:

- Chapter 2 – Monitoring and Evaluation
- Chapter 3 – Progress and Monitoring
- Chapter 4 – Lessons Learned
- Chapter 5 – Summary and Conclusions

[1] The temporary replacement 400 bus service commenced from November 2021

2 MONITORING AND EVALUATION

2.1 GUIDANCE

2.1.1. Department of Transport (DfT) guidelines as set out in the Monitoring and Evaluation Framework for Local Authority Major Schemes[2] (September 2012) and the Monitoring and Evaluation Strategy[3] (March 2013) outline the need to produce Monitoring and Evaluation Plans (MEP). The guidance identifies three tiers of monitoring and evaluation:

- 'Standard Monitoring' – where schemes monitor and report on a standard set of measures
- 'Enhanced Monitoring' - schemes costing more than £50m or which are anticipated to have a significant impact on particular indicators
- 'Fuller Evaluation' – DfT specified selection of schemes

2.1.2. Before construction and at the time of drafting the FBC, the scheme had an anticipated cost of £3.6m in 2019 prices. With overall costs at less than £50m this scheme therefore falls into the 'Standard Monitoring' tier.

2.1.3. The Monitoring and evaluation framework can demonstrate that any funding obtained has provided value for money and that any lessons learnt are captured as evidence to inform future decision making. The following measures are to be used as part of the 'Standard Monitoring' process, in order to assess a scheme in accordance with DfT guidance:

- scheme build
- delivered scheme
- costs
- scheme objectives
- travel demand
- travel times and reliability of travel times
- impact on the economy
- carbon impacts

2.2 SCOPE

2.2.1. The scope of a monitoring and evaluation report is to outline the metrics and measures (where available) used to assess the delivery and performance of a scheme, in order to determine whether the aims and objectives set out in the business case have been achieved.

2.2.2. The FBC[4] for the scheme outlined the need to undertake a monitoring and evaluation process, but a full MEP was not produced.

2.2.3. A full '*Monitoring and Evaluation One Year After Opening Report'* is not required at this stage, due to the permanent Thames Valley Park & Ride bus service not yet being in operation[5]. This has been

[2] https://www.gov.uk/government/publications/monitoring-and-evaluation-framework-for-local-authority-major-schemes

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/175300/monitoring-evaluation-strategy.pdf

[4] https://www.myjourneywokingham.com/media/1493/tvp-park-and-ride-full-business-case.pdf

[5] https://www.myjourneywokingham.com/bus-travel/park-and-ride/thames-valley-park-ride/

delayed due to a significant reduction in use of bus services and especially park and ride services both across the borough and nationally as a result of the Covid pandemic.

2.2.4. A temporary bus service (Reading Buses Number 400) was until very recently in operation whilst the Winnersh Triangle Park and Ride extension is being constructed.

2.2.5. Consequently, the TVB LEP have requested a 'lite' document at this stage which includes:

- scheme details
- construction programme
- scheme costs

2.2.6. Given the above context, the TVB LEP and WBC agreed in October 2021 that the following activities were to be excluded from this 'lite' report:

- baseline report
- new transport modelling and re-evaluation of scheme benefits
- before and after traffic data
- accident analysis
- ridership of bus service

2.2.7. It is anticipated that a full '*Post Opening Monitoring and Evaluation Report'* could be provided once a full bus service has been in operation for one year. This could include a full assessment of the performance of the scheme, which has been listed above in section 1.

3 PROGRESS AND MONITORING

3.1 SCHEME DESIGN

3.1.1. To accurately measure the success of scheme delivery, before and after photos and design layouts of the scheme have been reviewed and provided in Figure 3-1 through Figure 3-4 below. The original scheme description provided in the FBC and given above (section 1), has been reviewed and compared to the actual implemented scheme outputs to identify any changes or mitigating measures that were required during scheme delivery.

PRE-CONSTRUCTION

3.1.2. The scheme design proposed the following:

- 277 parking spaces including six disabled spaces
- five motorcycle spaces
- 12 cycle stands
- two Park and Ride bus stops for 12m long single decker buses
- bus shelter facilities

3.1.3. Figure 3-1 below shows a birds-eye-view of the site before construction commenced, Figure 3-2 shows the pre-construction layout and Figure 3-3 shows the original scheme drawing[6] (also included in Appendix A at full size). Appendix B shows the landscape detailing planned for the scheme.

Figure 3-1: View of the site pre-construction

[6] Drawing TVP.SK.006

Figure 3-2: Pre-construction layout

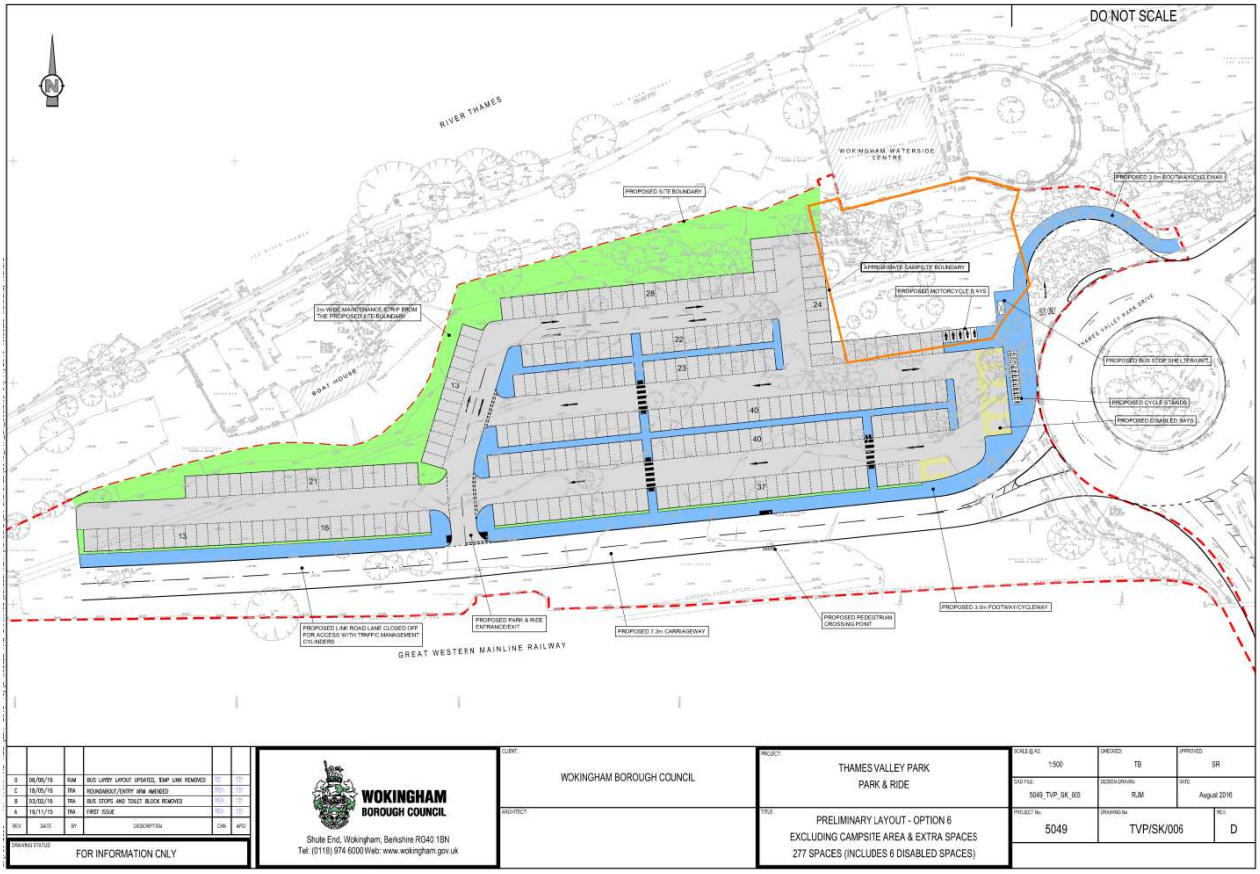


Figure 3-3 : Original scheme drawing

POST CONSTRUCTION

3.1.4. A site visit on 17th May 2022 confirmed that the completed scheme comprises of 258 car parking spaces (19 less than planned) as part of a park and ride facility including:

- 258 parking spaces including six disabled spaces
- eight motorcycle spaces
- 15 cycle stands
- one park and ride bus stop for a 12m long single decker bus
- bus shelter facilities

3.1.5. A Health and Safety Report from 14th April 2021 also identified the following infrastructure and facilities as part of the delivered scheme:

- enabling ground works to level the topography for future surfacing
- installation of tree route protection to north boundary
- associated service connections - drainage works
- electrical works - lighting columns, entrance barriers, ticket machines, CCTV etc.
- surfacing of car park and access road from the roundabout, including footways
- construction of 131m of retaining walls with associated edge protection / parapets - road markings for parking bays, bus stops, pedestrian crossing points etc.
- construction of permanent height restrictive goal posts / bunting at entrance
- construction of car park perimeter fencing

3.1.6. Figure 3-4 below shows a view of the completed scheme.

Figure 3-4: View of completed scheme

3.1.7. The following design iterations were made, which are also shown in Appendix C:

- **TQ12** – Contour levels changed giving new levels on kerbs as per 5165280-ATK-TVP-xx-SK-D-0003
- **TQ40** – As per response from principal designer, the bus stop was removed and new points issued, as per the C2 revision
- **TQ43** – SSE Telecoms Chamber raised and reconstructed by SSE as per TQ43
- **TQ69** – No information regarding colour of block paving. Client responded instructing a Brindle Block
- **BBLP Instruction CRXL0004** – The dropped kerbs and crossing point in this island has been removed as per instruction from BBLP stated above. Area has also been changed to block paving
- **BBLP Instruction** – As per instruction issued 06.03.20 – VGC moved the edging line to tie in with the corner of the wall, rather than the corduroys

3.1.8. Section 3.3 below, covers the scheme programme which shows some of the issues which led to design iterations. Lessons learned are included in section 4 which also provides further detail.

3.1.9. The site was also used as a Covid-19 testing centre during 2021[7].

3.1.10. At present, there is a private bus service operating from TVP P&R serving the Royal Berkshire Hospital (RBH). This is part of a trial with hospital staff able to park at the site and as this trial progresses it is hoped that this can be extended to visitors of RBH.

SUMMARY

3.1.11. Although there was a 19 space decrease in provision, from 277 to 258 spaces due to design changes, the overall scheme offer is largely reflective of the original scheme design with an increase in the number of motorcycle spaces and cycle stands provided.

3.2 SCHEME CONSTRUCTION COST

PRE-CONSTRUCTION

3.2.1. The FBC gave the capital cost of the scheme in 2017 prices as £3.6m, of which £2.9m was to be obtained from the LEP Local Growth Deal, with the remaining £700,000 being funded by a local contribution via a Community Infrastructure Levy (CIL)[8]. This funding split is shown in Table 3-1 below.

Table 3-1 – Pre-construction scheme funding profile (£m outturn 2017 prices rebased to 2010)

	2017/18	2018/19	2019/20	Total
Amount from LEP Local Growth Deal	0.25	1.75	0.9	2.9
Local contributions	-	-	-	-
Section 106 agreements	-	0.7		0.7
Total	**0.25**	**2.45**	**0.9**	**3.6**

[7] https://www.readingchronicle.co.uk/news/19039723.covid-19-testing-centre-will-open-thames-valley-park/
[8] https://www.myjourneywokingham.com/media/1509/c-public-accounts-table.pdf

3.2.2. The cost estimate included a 10% allowance for design and project management, a P50[9] post-mitigation allowance of £523,118 and a 15% uplift for optimism bias[10]. Maintenance and renewal costs were to be covered through parking charges via the scheme once operational.

3.2.3. Table 3-2 from the FBC gives a breakdown of the scheme cost estimate for the design, preparation and construction of the scheme, with a spend profile. The forecast does not show a breakdown for land costs, Part 1 and other claim estimates, core contract team costs, survey costs, enabling works and construction costs including risks.

Table 3-2 – Pre-construction scheme costs (£m outturn 2017 prices rebased to 2010)

	2017/18	2018/19	2019/20	Total
Detailed Design	0.25	-	-	0.25
Preparation and Construction	-	2.45	0.9	3.35
Total	**0.25**	**2.45**	**0.9**	**3.6**

3.2.4. The Benefit Cost Ratio (BCR) of the scheme was given as 3.23, meaning that the scheme would deliver £3.23 back for every £1 spent.

POST CONSTRUCTION

3.2.5. This section compares the original scheme budget with the final costs of the scheme. The final costs of the scheme were £5,336,559.36. At the time of writing the detailed breakdown of this cost was awaited. It should be noted that the scheme was substantially complete at the time of the Pandemic and as such WBC stopped reporting any further spend to the LEP; however, ongoing security and management costs throughout the period significantly impacted on the costs until the final works (including unrelated works by third parties) were concluded.

SUMMARY

3.2.6. The overspend of £1,736,559.36 was determined to be as a result of a number of factors which are summarised below:

- the Covid-19 pandemic brought about a range of delays which lead to significant cost increases and programme delays
- the scheme build was close to completion at the beginning of the pandemic in 2020, however due to the pandemic final completion was significantly delayed and took a year longer than anticipated leading to significant additional cost
- the scheme was part of a design and build contract under Option E meaning that the full design and build spend associated changes listed in paragraph 3.1.7 above could be claimed by the contractor
- ongoing post construction maintenance costs (circa £65,000 per annum) had not been established in the FBC, which stated that maintenance and renewal costs would be covered by a park and ride charge which was also not specified

[9] P50 is when 50% of estimates exceed the P50 estimate and 50% of estimates are less than the P50 estimate, meaning it is a good middle estimate.
[10] https://www.myjourneywokingham.com/media/1522/e-161005-tvp-pr-qra-risk-v2.pdf

3.3 SCHEME PROGRAMME

3.3.1. To understand if the scheme was built and delivered on time in line with key project milestones, planned delivery timescales have been reviewed against actual dates of completion. Where key milestones have not been met, an explanation of the reason/s for the delay have been provided. This information is summarised in Table 3-4 below.

PRE-CONSTRUCTION

3.3.2. A detailed scheme programme was not available at the time of drafting the FBC, therefore an indicative programme was provided (Table 3-3 below). The scheme was due to be constructed between Q2 2018 and Q1 2019.

Table 3-3 – Indicative pre-construction programme from the FBC

Key Task	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019
Stakeholder liaison	Completed (*as of July 2017*)							
FBC Submission								
Board Consideration								
Detailed Design								
Procurement								
Construction Start								
Construction Complete								

POST CONSTRUCTION

3.3.3. Table 3-4 shows a comparison of project milestones for the scheme, pre and post construction, with associated comments for any delays given where they exist.

Table 3-4 - Programme comparison

Key Milestones	Anticipated Programme Date	Actual Programme Date	Delay	Comments
Works start	Q2 2018	January 2019	6 months	The six-month delay in starting construction was due to a range of design changes.
Completion works	Q1 2019	March 2022	1 year	The delay in scheme completion has been determined to be primarily due to the Covid-19 pandemic and a number of design changes.

SUMMARY

3.3.4. The FBC outlined the overall programme key milestones in delivering the scheme, these are then compared to the actual dates the programme occurred, these are shown in Table 3-4. The completion

of the works fell behind schedule due mainly to the Covid-19 pandemic, but also due to several changes in design.

3.4 SCHEME OBJECTIVES AND MEASURES FOR SUCCESS

OBJECTIVES

3.4.1. The FBC for the scheme outlined the intent to provide 277 car parking spaces and an alternative travel choice for residents around the Wokingham borough to access Reading town centre by the A4 London Road. The site was to be served by an existing shuttle bus service between Thames Valley Park and Reading town centre. The objectives of the scheme were to:

- **Objective 1:** Support the forecast housing growth of 13,000 units by 2026 in Wokingham
- **Objective 2:** Reduce congestion on the A4 corridor
- **Objective 3:** Encourage car drivers to access central Reading using public transport
- **Objective 4:** Support other park and rides, including Winnersh Triangle Park and Ride

3.4.2. The scheme intended to help to improve access to Reading along the A4 corridor. This improved access by public transport planned to reduce congestion and support economic growth. Between 2017 and 2026 Wokingham Borough is set to deliver 13,000 new homes, of which 4,450 are located surrounding the A329 corridor in Winnersh (450 units), North Wokingham (1,500) and South Wokingham (2,500). The scheme aimed to support this growth by providing additional public transport capacity into central Reading to accommodate the increased usage

3.4.3. As already outlined in section 1, the scheme objectives and measurements of success should be scrutinised in a future report in order to fully evaluate the overall success of the scheme.

4 LESSONS LEARNED

4.1.1. A lessons learned meeting was held on 02 November 2020, in which project performance was identified and discussed. Subsequently, the following key lessons learned were established:

- **Handover** - project handover quality needs to be improved – with the whole life scheme cost budget discussed and the business case/LEP expectations reviewed in detail
- **Governance** - project roles and responsibilities need to be better defined up front. Regular meetings to be held with the project team with spend to date against budget included on the agenda
- **Procurement** - align contractor procurement type with project budget and use Option B (Lump sum/fixed price) where possible on LEP schemes to keep spend in line with expectations

4.1.2. Additional lessons have been learned about managing a project through a health pandemic, which in this scheme's case led to unforeseen delay and unexpected, significant cost increases.

5 SUMMARY AND CONCLUSIONS

5.1 OVERVIEW

5.1.1. This '*Monitoring and Evaluation One Year After Opening "Lite" Report*' for the scheme presents the outcomes of a partial monitoring and evaluation undertaken after it was completed in March 2021 and opened to the public as a car park in June 2021.

5.1.2. This report covered the following sections:

- Monitoring and Evaluation
- Progress and Monitoring
- Lessons Learned

5.1.3. Subsequently the following conclusions have been drawn:

5.2 SCHEME DELIVERY

5.2.1. The scheme has been successfully built and opened to the public as a car park in June 2021. This comprises of 258 car parking spaces including six disabled spaces, as well as eight motorcycle spaces, 15 cycle stands and bus shelter facilities. The permanent park and ride bus service has not yet been provided given the significant reduction in use of bus services nationally and locally as a result of the Covid pandemic.

5.3 SCHEME DELAYS

5.3.1. The six-month delay in starting construction was due to a range of design changes and the one-year delay in scheme completion has been determined to be due to the Covid-19 pandemic and the design changes already mentioned.

5.4 SCHEME COST

5.4.1. The cost increase of £1,736,559.36 was determined to be as a result of a number of factors including chiefly the Covid-19 pandemic which brought about a range of delays, leading to significant cost increases. In addition, the scheme was part of a design and build contract under Option E meaning that the full design and build spend associated could be claimed by the contractor. Finally, ongoing post construction maintenance costs (circa £65,000 per annum) had not been established in the FBC but had been assumed to be covered by income from the car park serving the park & ride bus service.

5.5 LESSONS LEARNED

5.5.1. A number of lessons were learned, including project handover, governance and procurement, which have been identified in section 4; however, the main factor which lead to the scheme delays and increased costs were due to the limitations the pandemic placed upon the project.

5.6 NEXT STEPS

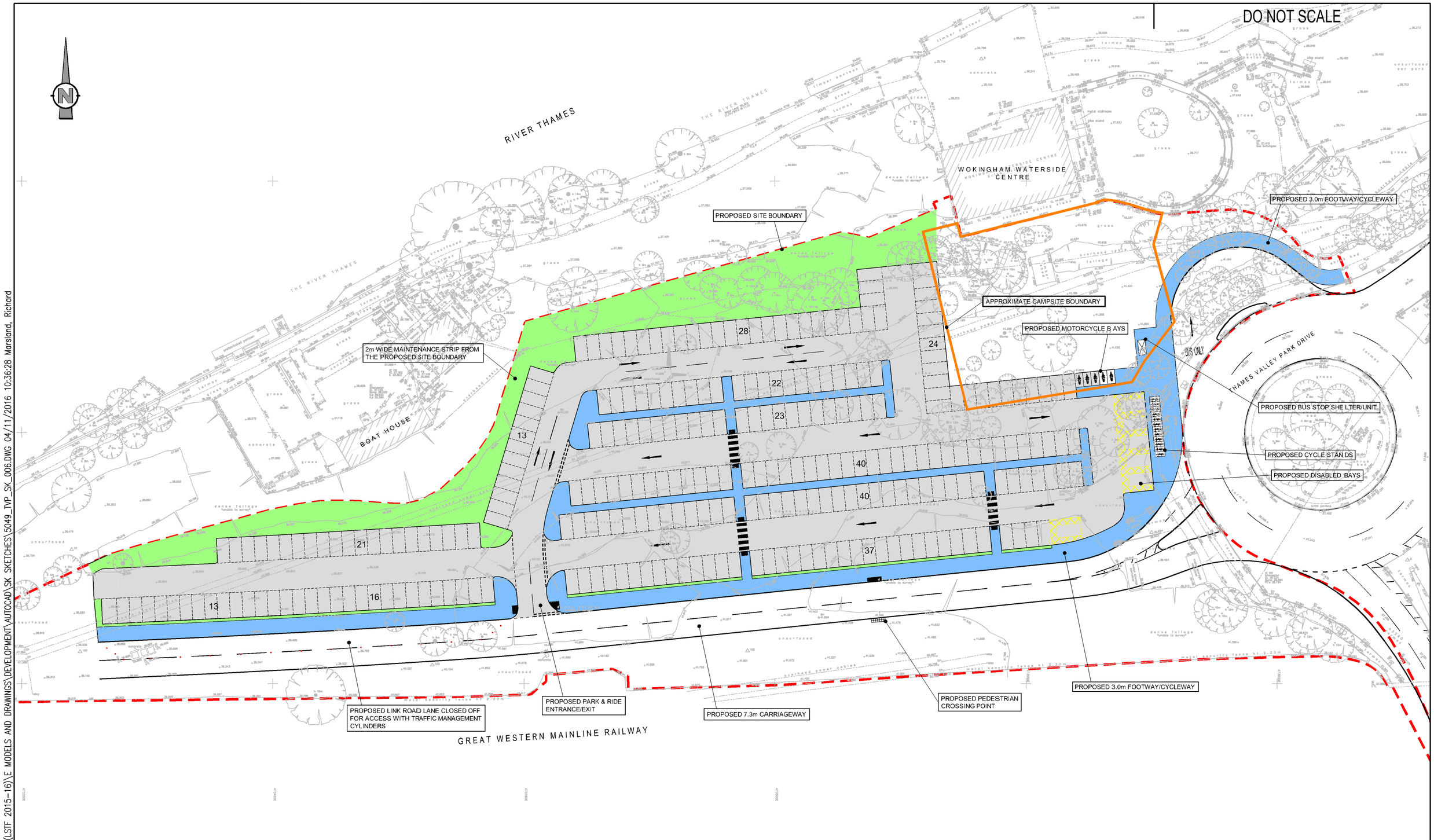
5.6.1. As highlighted in section 1, a full '*Monitoring and Evaluation One Year After Opening Report'* was not required at this stage.

5.6.2. It is anticipated that a full 'Post Monitoring and Evaluation Report' could be provided once a full bus service has been in operation for one year. This would include a full assessment of the performance of the scheme.

Appendix A

SCHEME DRAWING

DO NOT SCALE



REV	DATE	BY	DESCRIPTION	CHK	APD
D	08/08/16	RJM	BUS LAYBY LAYOUT UPDATED, TEMP LINK REMOVED	TB	TB
C	18/05/16	TRA	ROUNDABOUT/ENTRY ARM AMENDED	TRA	TB
B	03/02/16	TRA	BUS STOPS AND TOILET BLOCK REMOVED	TRA	TB
A	19/11/15	TRA	FIRST ISSUE	TRA	TB

DRAWING STATUS:
FOR INFORMATION ONLY

WOKINGHAM BOROUGH COUNCIL
Shute End, Wokingham, Berkshire RG40 1BN
Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

CLIENT: WOKINGHAM BOROUGH COUNCIL

ARCHITECT:

PROJECT: THAMES VALLEY PARK
PARK & RIDE

TITLE: PRELIMINARY LAYOUT - OPTION 6
EXCLUDING CAMPSITE AREA & EXTRA SPACES
277 SPACES (INCLUDES 6 DISABLED SPACES)

SCALE @ A2:	CHECKED:	APPROVED:
1:500	TB	SR
CAD FILE: 5049_TVP_SK_006	DESIGN-DRAWN: RJM	DATE: August 2016
PROJECT No: 5049	DRAWING No: TVP/SK/006	REV: D

S:\70012699 - TVP PARK AND RIDE (LSTF 2015-16)\E MODELS AND DRAWINGS\DEVELOPMENT\AUTOCAD\SK SKETCHES\5049_TVP_SK_006.DWG 04/11/2016 10:36:28 Marsland, Richard

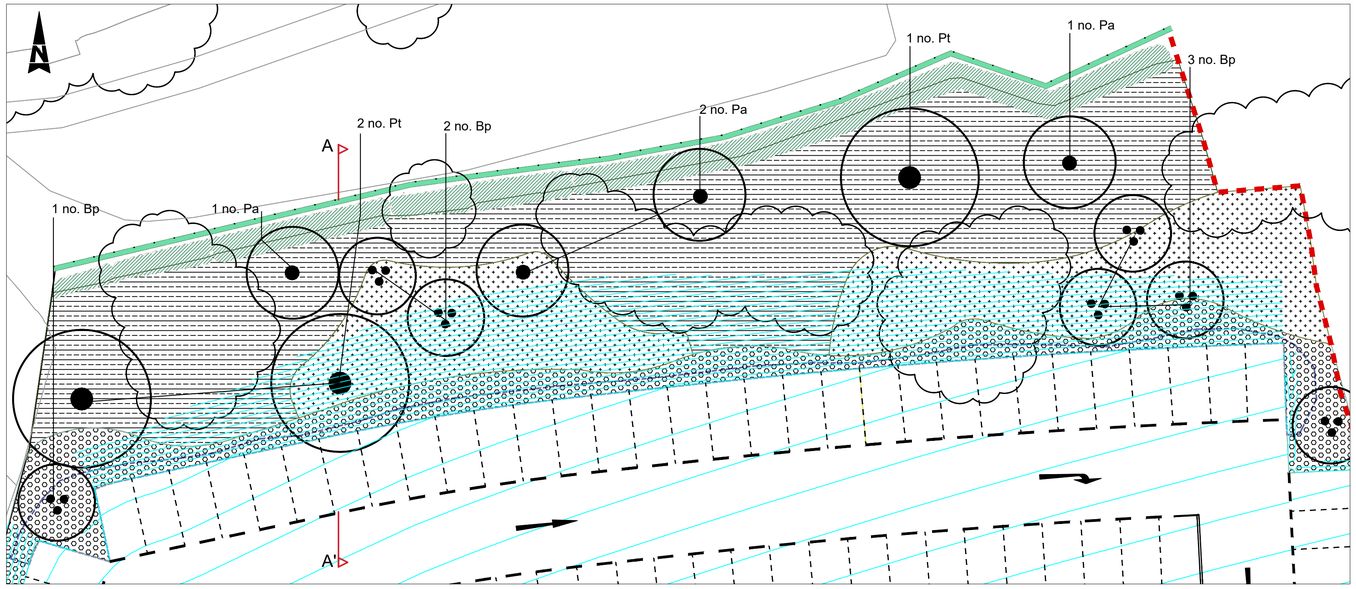
Appendix B

LANDSCAPE DETAILING

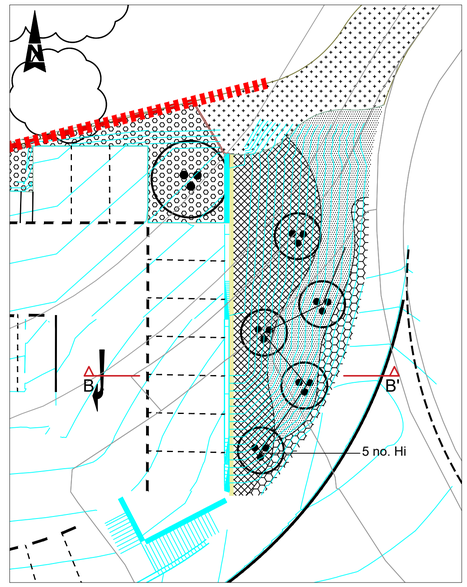
DO NOT SCALE

Millimetres 0 10 100

Landscape Detail Plan 1 - Scale 1/200



Landscape Detail Plan 2 - Scale 1/200



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 significant residual risks (Reference shall also be made to the design hazard log).

1 - WORKING NEAR A ROAD AND ACCESS TO BUSINESS PARK
a) Fencing working site and provide adequate signage

2- WORKING NEAR A TRAIN LINE
a) Fence train line limits and provide adequate signage

3 - SEVERE WEATHER CONDITIONS
a) Removal of flood debris where required

b) Removal of any blockages to ditches or watercourses

4 - TRIP HAZARDS
a) All surfaces should be free of debris

b) Contractor is to construct and ensure that all surfaces are homogenous and free from pot holes and divots

5 - PLANTING FAILURE, TREES WHICH ARE OF RISK TO HEALTH AND SAFETY, DEAD, DYING OR DISEASED
a) Long term trees should be inspected on an annual basis for any signs of damage or disease

b) No ash to be planted

6 -PEDESTRIAN SAFETY
a) Ensure all working areas are effectively cordoned off to prevent unauthorized access of pedestrians into spaces undergoing works.
b) Ensure a safe distance/pathway is left for pedestrians to pass by undergoing works (minimum 2.5m width).

7 - SITE WASTE (LEFT-OVER SOIL HEAPS, TREE WORKS PLANT WASTE)
a) Ensure all waste is safely disposed of off-site before re-opening area to the public.

b) Monitor implementation check for differential settlement leading to trips.

a) Landscape contractor to inspect soiling and finished planting areas to avoid any trip hazards

8 -WORKERS SAFETY WORKING NEAR HOUSING
a) Work securely to avoid any injuries and material felling into private property.

9 - WORKERS SAFETY MANUAL LIFTING
a) Try to avoid oversized design elements for construction and maintenance of works

10- WORKERS SAFETY WORKING NEAR WALL OR STRUCTURES
a) Requires contract management during the works implementation with alternative temporary routes.

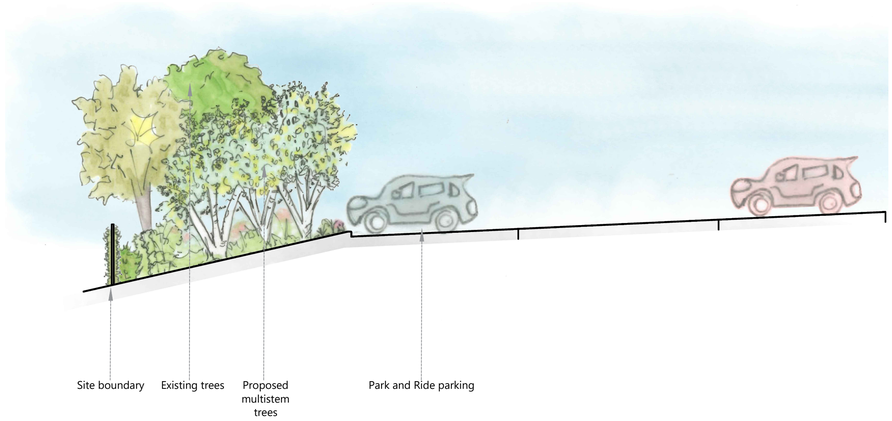
11 - WORKING NEAR THE RIVER THAMES AND THAMES PATH
a) Ensure that signs are installed indicating the river and path proximity.

NB: THIS TABLE APPLIES TO ALL DRAWINGS AND DETAILS.

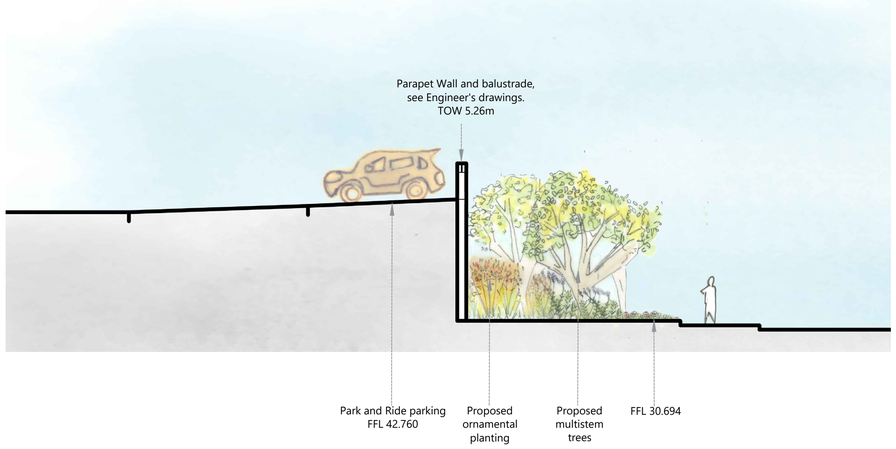
Notes:

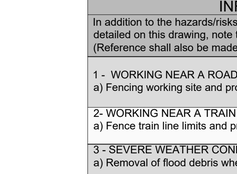
Refer to current revision of **5165280-ATK-XX-XX-DR-L-003** and planting schedule for species details.

Illustrative Cross Section A-A' - Scale 1/100

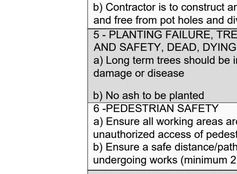


Cross Section B-B' - Scale 1/100

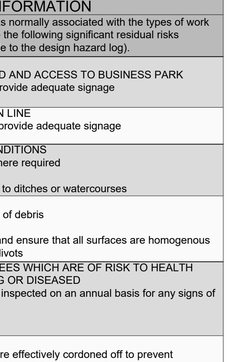




Wire mesh powder coated security fence of 1.83m height



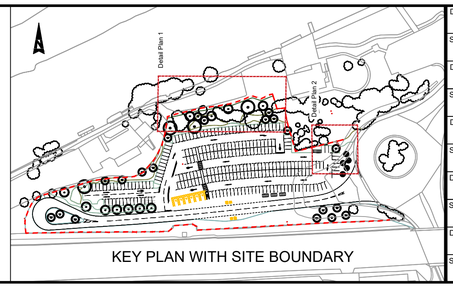
Instant hedge of 1.25m initial height to be grown to a maximum of 2.5m



Ivy screen of 1.8 m height with incorporated fence and 3m when wall mounted

KEY:

- EuroGuard® Flatform Welded Mesh Panel or equal approved
- Hedera helix Screen module- 1.20x30x1.8 (20 cm depth)
- 76m used as fence
- 22m wall mounted
- Proposed contours
- Native Instant Hedge
- Native Mix 1
- Native Mix 2
- Mix 3 Ground cover planting
- Bulbs
- Mix 4 - Ornamental Planting Flowy Grasses with seasonal interest
- Mix 4 A - Ornamental Planting Pop of colour
- Mix 4 B - Ornamental Planting Groundcover



KEY PLAN WITH SITE BOUNDARY

Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
THIRD ISSUE						
S4	R0	CP	AS	NH	SW	23/01/2019
SECOND ISSUE						
S3	R0	CP	GS	NH	SW	22/12/2018
FIRST ISSUE						
S0	R0	ST	GS	NT	SW	17/07/2018

Drawing Suitability: SUITABLE FOR PLANNING — Status: S4

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Client: WOKINGHAM BOROUGH COUNCIL
Shute End, Wokingham, Berkshire RG40 1BN
Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

Project Title: THAMES VALLEY PARK PARK & RIDE

Drawing Title: SOFT LANDSCAPE DETAIL AREAS 1 AND 2

Drawing Number: Project 5165280 | Originator ATK | Volume GEN | Location XX_XX | Type DR | Role L | Number 002

Original Size: A1 | Scale: 1:500 | Project Ref. No: 5165280 | Sheet: 1 of 1 | Rev: R0

Appendix C

DESIGN CHANGES

NAME	ROLE	ORGANISATION	SIGNATURE	DATE
Jack Davies	Engineer	VGC	Davies J.	04/11/2019
Dean Underdown	Project Manager	Balfour Beatty LP	Dean Underdown	04/11/2019
		ATKINS		

TQ 69 – No information regarding colour of block paving. Client responded instructing a Brindle Block.

TQ 43 – SSE Telecoms Chamber raised and reconstructed by SSE as per TQ 43

BBLP Instruction – As per instruction issued 06.03.20 – VGC moved the edging line to tie in with the corner of the wall, rather than the cordurovs.

BBLP Instruction CRXL0004 – The dropped kerbs and crossing point in this island has been removed as per instruction from BBLP stated above. Area has also been changed to block paving

TQ 40 – As per response from principal designer. The bus stop was removed and new points issued, as per the C2 revision.

TQ 12 – Contour levels changed giving new levels on kerbs as per 5165280-ATK-TVP-zz-SK-D-0003

NOTES:
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. FOR TYPICAL CROSS-SECTIONS REFER TO DRAWING NO. 5165280-ATK-GEN-XX_XX-DR-CH-001100,1101 & 1102.
3. FOR LANDSCAPING DETAILS REFER TO DRAWING NO. 5165280-ATK-GEN-XX_XX-L-CH-000001,000002 & 000003.
4. FOR RETAINING WALL DETAILS REFER TO DRAWING NO. 5165280-ATK-GEN-XX_XX-ST-CH-000510,000530 & 000531.
5. FOR DRAINAGE LAYOUT DETAILS REFER TO DRAWING NO. 5165280-ATK-GEN-XX_XX-DR-D-000001

PARKING SPACE TOTALS					
ZONE	STANDARD	DISABLED	EV CHARGING	MOTOR CYCLE	BICYCLE STANDS
TOTAL	248	6	4	8	12

LEGEND :
- HB2 KERB LINE
- CS2 KERB LINE
- ROAD CENTRE LINE
- OVERHEAD ELECTRICITY CABLES
- UNDERGROUND GAS PIPELINE
- UNDERGROUND ELECTRICITY / FIBRE OPTIC CABLE
- PROPOSED RETAINING WALL
- SITE BOUNDARY
- EXISTING ELECTRICITY POLE
- SECTION MARKER
- PROPOSED LIGHTING COLUMN
- PROPOSED ACCESS ROAD CARRIAGEWAY
- PROPOSED IMPERMEABLE CAR PARKING BAYS
- PAVER BLOCK
- TARMAC FOOTWAY
- PROPOSED PERMEABLE CAR PARKING BAYS
- PROPOSED PEDESTRIAN ROUTE
- PROPOSED LANDSCAPING
- PROPOSED BUS SHELTER
- PROPOSED IMPERMEABLE CAR PARKING AISLES
- TACTILE PAVING

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 significant residual risks (Reference shall also be made to the design hazard log).

Construction: NONE

Maintenance / Cleaning: NONE

Use: NONE

Decommissioning / Demolition: NONE

Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
S0	R1	ST	GS	NT	SW	29/06/18
S0	R0	ST	GS	NT	SW	17/07/18

Description: TIE-IN DETAILS TO EXISTING UPDATED; FIRST ISSUE

Drawing Suitability: SUITABLE FOR PLANNING — Status: S0

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Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

Project Title: THAMES VALLEY PARK PARK & RIDE

Drawing Title: GENERAL ARRANGEMENT

Drawing Number: Project 5165280 | Originator ATK | Volume GEN | Type XX_XX | Role DR | Number CH 000100

Original Size: A1 | Scale: 1:500 | Project Ref No: 5165280 | Sheet: 1 of 1 | Rev: R1

Plotted: 11/01/2019 15:06:57 By: NAGO2713

Appendix D

RISK REGISTER

Probability	Min	Max	Score
Very Likely	60%	100%	5
Likely	30%	60%	4
Fairly Likely	10%	30%	3
Unlikely	5%	10%	2
Very Unlikely	0%	5%	1
Cost Impact	**Min**	**Max**	**Score**
VH	£250,000	£500,000	5
H	£125,000	£250,000	4
M	£62,500	£125,000	3
L	£31,250	£62,500	2
VL	£1	£31,250	1

	Category
Threat	Technical
Opportunity	Commercial
Estimate Uncertainty	Reputational
	Safety
	Environmental
	Organizational
	Aesthetic
	Approval
	Construction
	Showstopper
	Non cost risk

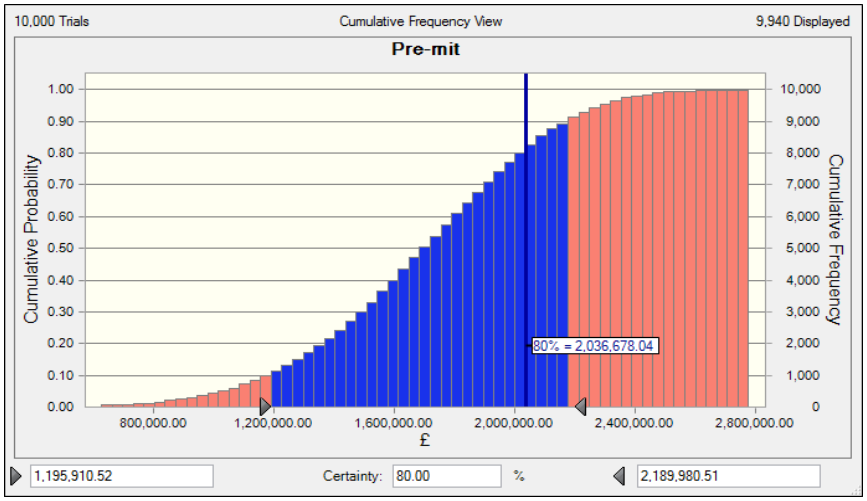
	TVP P&R		PRE - MITIGATION								RESIDUAL RISK POST MITIGATION		
Risk ID	Risk Description	Threat / Opportunity	Probability of Occurrence	Cost Impact if Occurs	Overall Risk Score	Risk Response	Risk Org	Risk Mitigation Owner	Cost of Risk Intervention	Cost Estimate Notes	Probability of Occurrence	Cost Impact if Occurs	Overall Risk Score
	PROJECT RISKS												
1.1	Land required currently in Oracle ownership	Threat	Very Likely	VH	25	Met with Oracle (4/8/15) and land will be passed to WBC. Draft Heads of Terms sent to Oracle solicitors on 6/6/16.	WBC		£0	Initial discussions taken place with land owners	Unlikely	VH	10
1.2	Wokingham Waterside Centre objecting to application	Threat	Fairly Likely	M	9	Met with WWC and have ensured that campsite retained and made WWC aware.	WBC		£0		Unlikely	M	6
1.3	Potential of GCN present nearby	Threat	Fairly Likely	H	12	Met with WBC. They are aware of neighbouring pond and say Oracle have tested it and found no GCN.	WBC		£0	Detailed surveys already undertaken	Very Unlikely	H	4
1.4	SGN Gas Main obstructing construction	Threat	Very Likely	VH	25	Initial Correspondence positive. Detailed Design will ensure elevation of access road is not reduced below current ground level over pipe. On 5/5/16 asked that "options other than gabion wall" would be preferred. Detailed design to be sent to SGN once available. SGN have asked that road is not built on top of existing gas valve. CM	WBC		£0	Detailed discussions have taken place with SGN	Unlikely	VH	10
1.5	TVP Directors not allowing use of TVP Shuttle	Threat	Very Likely	VH	25	Actions to be taken to persuade TVP Directors of benefits. TVP Management comfirmed 10/5/16 that the Board agrees in principle with draft heads of terms.	WBC/TVP		£0		Unlikely	VH	10
1.6	SSE works on overhead power lines - potential cost savings missed or design conflicts	Threat	Very Likely	VH	25	Met with SSE and have submitted request for cost estimates for diversions in two scenarios (one where the TVP P&R diversion and SSE work happen together, the second where they do not).	WBC/SSE		£0	Discussions already conducted with SSE and factored into scheme	Unlikely	VH	10
1.7	Allocated budget does not cover the cost to design and implement the scheme	Threat	Unlikely	M	6	Capital programme allocation within each council should be used to supplement delivery where possible	WBC		£0	Unknown Value	Unlikely	M	6
1.8	Opposition from key stakeholders	Threat	Fairly Likely	M	9	Early consultation exercises and continued consultation with key stakeholders	WBC		£0		Unlikely	M	6
1.9	Statutory Utilities in existing verges and road areas	Threat	Likely	H	16	Early C2 collation and adjustment to design as required plus C3 stats design processes.	WBC		£20,000	Need for detailed C2 and trial hole informaiton, costs for contractor trial holes or Sumo surveys only at key locations	Unlikely	H	8
2.0	Lack of topographical information	Threat	Unlikely	M	6	Check and update current land survey information for council sections and organise any missing or commission new surveys.	WSP|PB		£0	Detailed surveys already undertaken	Very Unlikely	M	3
2.1	Failure to agree on technical design issues	Threat	Likely	M	12	Internal discussions between various authority technical officers with input from modelling work. Road safety audits will be needed on detailed design.	WBC/WSP|PB		£0	Application already submitted, detailed design already agreed	Fairly Likely	M	9
2.2	Lack of co-ordination with other highway works	Threat	Very Unlikely	M	3	Early discussions over highway access arrangements and section 50 notices.	WBC		£0	Officer Role	Unlikely	M	6
2.3	Unforeseen ecological sensitivities	Threat	Very Likely	H	20	Ecology survey undertaken for and plan for any risks	WBC/WSP|PB		£0		Unlikely	H	8
2.4	Supply chain insolvencies	Threat	Unlikely	M	6	Local Term Contractor to be used for delivery, existing contract in place	WBC		£0		Unlikely	L	4

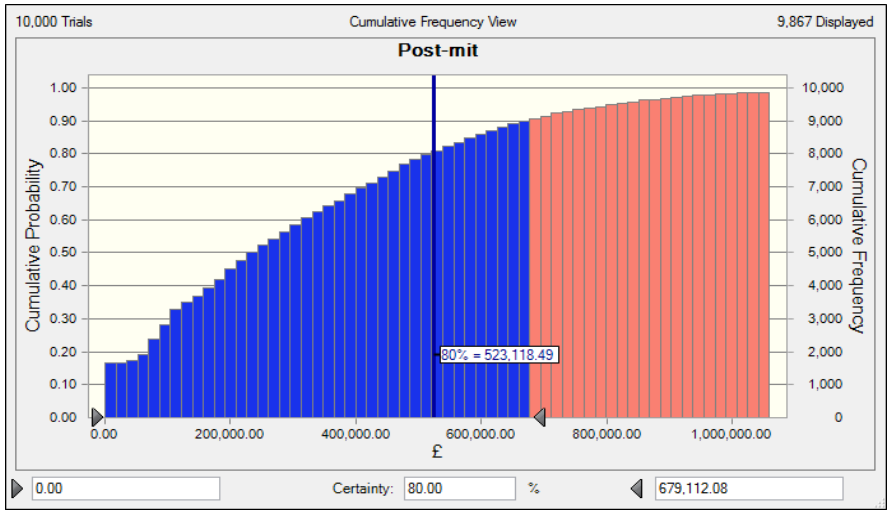
The results of the Monte Carlo simulation are recorded below. Please note the following:
1. Risks can be either threats or opportunities. The convention used here is that threats are expected to add cost to the project and therefore they are numerically positive in value and opportunities are expected to remove cost from the project and therefore they are numerically negative.
2. Confidence levels are derived from the simulation. For example the P80 risk value represents the risk value that 80% of the simulation results were equal to or below. Therefore, in theory, if the contingency value were set at the P80 value you could be 80% certain that it would be sufficient.
3. The simulation was run with 10,000 iterations

Scheme Value: £3,200,000

	Pre-Mitigation	Post-Mitigation
P_0	£116,387	£0
P_{50}	£1,714,417	£242,062
P_{80}	£2,036,678	£523,118
P_{100}	£2,876,353	£1,607,040

Pre-Mitigation Mean Risk	**£**	**1,700,998**	53%
Post Mitigation Mean Risk	£	305,007	10%
Estimated Cost of Mitigation	£	20,000	
	£	**325,007**	10%





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