

LAND EAST OF CHIPPENHAM / CHIPPENHAM RIVERSIDE**VOLUME 1 OF 3****ENVIRONMENTAL STATEMENT CONTENTS**

Note. A Non-Technical Summary is provided within **Volume 3**.

1 Introduction

Prepared by CSJ Planning

1.1	The Planning Application.....	1-1
1.2	Requirement for an EIA.....	1-2
1.3	Purpose of the ES.....	1-5
1.4	Structure of the ES.....	1-8
1.5	The EIA Team.....	1-11
1.6	Further Information.....	1-11

2 Site and Surrounding Area

Prepared by CSJ Planning

2.1	Site Location & Context.....	2-1
2.2	Chippenham.....	2-2
2.3	Existing Site Condition.....	2-4
2.4	Planning Status.....	2-4
2.5	Agricultural Land Classification.....	2-5
2.6	Contamination Status.....	2-5
2.7	Conservation Status.....	2-5
2.8	Topography.....	2-6
2.9	Vegetation.....	2-6
2.10	Water Environment.....	2-7
2.11	Pylons.....	2-8
2.12	Public Rights of Way.....	2-8
2.13	Site Access.....	2-8
2.14	Public Transport.....	2-9
2.15	Highway Network.....	2-9
2.16	Cycle Routes.....	2-9

3 EIA Methodology and Scoping Exercise*Prepared by CSJ Planning*

3.1	Introduction.....	3-1
3.2	General EIA Methodology.....	3-1
3.3	Scoping Exercise.....	3-10

4 Development Proposals*Prepared by CSJ Planning*

4.1	Introduction.....	4-1
4.2	Chippenham (Background to the Proposed Development).....	4-3
4.3	Proposed development.....	4-3
4.4	Land Use.....	4-4
4.5	Residential.....	4-4
4.6	Landscape.....	4-5
4.7	Local Centre.....	4-5
4.8	Education.....	4-6
4.9	Density.....	4-6
4.10	Landscape & Ecology.....	4-9
4.11	Parking.....	4-10
4.12	Crime Prevention.....	4-11
4.13	Phasing and Delivery.....	4-12

5 Development Need and Alternatives*Prepared by CSJ Planning*

5.1	Introduction.....	5-1
5.2	Need.....	5-1
5.3	Alternatives.....	5-2
5.4	The 'No Development Alternative'.....	5-3
5.5	Alternative Sites.....	5-4
5.6	Alternative Designs.....	5-6

6 Planning Policy Context*Prepared by CSJ Planning*

6.1	Introduction.....	6-1
6.2	The Development Plan.....	6-1
6.3	Live Consultation – Statement of Community Involvement.....	6-4

6.4	Live Consultation – Consultation on the partial review of the WC Core strategy....	6-4
6.5	Supplementary Planning Documents.....	6-4
6.6	Leg/ Citations / UK, Regional & Local Conservation Policy/Other Strats.....	6-4
6.7	National Planning Policy Framework.....	6-6
6.8	National Planning Practice Guidance.....	6-7
6.9	Emerging Policy	6-8

7 Landscape and Visual Impacts, including Historic Landscape

Prepared by Judith Bridges Associates

7.1	Introduction.....	7-1
7.2	Scope and Methodology.....	7-1
7.3	Landscape Assessment Methodology.....	7-2
7.4	Landscape Features.....	7-15
7.5	Visual Characteristics.....	7-22
7.6	Landscape and Visual Constraints and Opportunities.....	7-28
7.7	Landscape Strategy.....	7-35
7.8	Landscape and Visual Impact of the Proposals.....	7-46
7.9	Summary and Conclusions.....	7-54
7.10	Comparative Assessment of Chippenham DPD Proposals.....	7-56

8 Ecology and Nature Conservation

Prepared by Aspect Ecology

8.1	Introduction.....	8-1
8.2	Legislative and Planning Policy Context.....	8-1
8.3	Assessment Methodology and Significance Criteria.....	8-11
8.4	Baseline Conditions.....	8-27
8.5	Likely Significant Effects.....	8-53
8.6	Mitigation and Enhancement Measures.....	8-59
8.7	Residual and Cumulative Impacts.....	8-70
8.8	Summary.....	8-71

9 Archaeology

Prepared by Cotswold Archaeology

9.1	Introduction.....	9-1
9.2	Guidance and Industry Good Practice.....	9-2
9.3	Sources of Information.....	9-3

9.4	Planning Policy.....	9-6
9.5	Methodology.....	9-10
9.6	Baseline Conditions.....	9-15
9.7	The value of identified Heritage Assets (archaeology).....	9-24
9.8	Impact Assessment.....	9-28
9.9	Mitigation Measures.....	9-30
9.10	Residual Effects.....	9-31
9.11	Cumulative Effects.....	9-32
9.12	Conclusions and Summary.....	9-32
9.13	Bibliography.....	9-34

10 Cultural Heritage

Prepared by Heritage Places

10.1	Introduction.....	10-1
10.2	Scope and Methodology.....	10-2
10.3	Baseline Conditions.....	10-8
10.4	Impact Assessment.....	10-34
10.5	Mitigation Measures.....	10-52
10.6	Comparative Heritage Assessment of application against DPD allocation.....	10-52
10.7	Summary.....	10-61

11 Agricultural Land Assessment

Prepared by Savills

11.1	Introduction.....	11-1
11.2	Legislation and Policy.....	11-1
11.3	Methodology.....	11-3
11.4	Baseline Conditions.....	11-8
11.5	Significant Effects.....	11-15
11.6	Scope of Mitigation.....	11-17
11.7	Residual Effect Assessment.....	11-18
11.8	Monitoring.....	11-18
11.9	Conclusion.....	11-19

12 Water Environment

Prepared by Waterman Group

12.1	Introduction.....	12-1
------	-------------------	------

12.2	The Site – General Description.....	12-1
12.3	The Proposed Development.....	12-2
12.4	Scope and Methodology.....	12-3
12.5	Planning Policy Requirements.....	12-6
12.6	Local Planning Policy.....	12-7
12.7	The Site Flood Risk Context.....	12-9
12.8	Sequential Test.....	12-10
12.9	Baseline Conditions.....	12-15
12.10	Baseline for Hydrological Regime.....	12-16
12.11	Hydrological Assessment.....	12-18
12.12	Pluvial Flooding.....	12-19
12.13	Sewer Flooding.....	12-20
12.14	Hydraulic Modelling.....	12-20
12.15	Model Results – existing scenario.....	12-21
12.16	Baseline for Drainage Regime.....	12-24
12.17	Assessment of Potential Impacts.....	12-24
12.18	Drainage Regime.....	12-29
12.19	Mitigation Measures.....	12-34
12.20	Proposed Surface Water Drainage Strategy.....	12-40
12.21	Residual Impacts.....	12-45
12.22	Cumulative Impacts.....	12-45
12.23	Development Land Safeguarded for Potential Provision of a new branch to the Kennet and Avon Canal.....	12-46
12.24	Summary.....	12-47

13 Contaminated Land

Prepared by Bureau Veritas

13.1	Introduction.....	13-1
13.2	Scope and Methodology.....	13-2
13.3	Legislative and Policy Context.....	13-2
13.4	Methodology.....	13-4
13.5	Baseline Conditions.....	13-10
13.6	Environmental Settings.....	13-15
13.7	Historical Site Use and Data.....	13-15
13.8	Geology.....	13-18
13.9	Hydrogeology.....	13-21
13.10	Hydrology.....	13-22

13.11 Waste Management Activities.....	13-24
13.12 Hazardous Installations.....	13-24
13.13 Pollution Control Authorisations.....	13-25
13.14 Past Pollution Incidents.....	13-25
13.15 Radon Hazards.....	13-26
13.16 Ecological Features.....	13-26
13.17 Impact Assessment.....	13-27
13.18 Mitigation Measures.....	13-32
13.19 Residual Impacts and Conclusions.....	13-34
13.20 Cumulative Impact Assessment.....	13-36
13.21 Summary.....	13-36

14 Noise and Vibration

Prepared by Entran Limited

14.1 Introduction.....	14-1
14.2 Scope and Methodology.....	14-1
14.3 Baseline Conditions	14-18
14.4 Predicted Impacts from Construction Phases	14-21
14.5 Predicted Impacts from the Completed Development	14-29
14.6 Mitigation Methods	14-37
14.7 Residual Impacts	14-41
14.8 Summary	14-42

15 Air Quality

Prepared by Entran Limited

15.1 Introduction	15.1
15.2 Scope and Methodology	15.1
15.3 Baseline Conditions	15.17
15.4 Potential Sources of Air Pollution	15.20
15.5 Predicted Impacts	15.21
15.6 Mitigation Measures	15.35
15.7 Residual Impacts	15.36
15.8 Summary	15.36

16 Traffic, Transport and Access*Prepared by Entran Limited*

16.1	Introduction.....	16-1
16.2	Scope and Methodology.....	16-2
16.3	Baseline Conditions.....	16-10
16.4	Potential Sources of Noise and Vibration.....	16-16
16.5	Predicted Impacts.....	16-16
16.6	Mitigation Measures.....	16-23
16.7	Residual Effects.....	16-27
16.8	Summary.....	16-29

17 Socio Economic Effects*Prepared by CSJ Planning*

17.1	Introduction.....	17-1
17.2	Planning Policy Context.....	17-2
17.3	Potential Socio-economic impacts.....	17-13
17.4	Cumulative effects.....	17-14
17.5	Assessment Scope and Methodology.....	17-16
17.6	Baseline Conditions.....	17-20
17.7	Predicted Impacts and Significance.....	17-34
17.8	Mitigation Measures.....	17-39
17.9	Cumulative Impacts.....	17-41
17.10	Summary.....	17-41

18 Cumulative Effects*Prepared by CSJ Planning*

18.1	Introduction.....	18-1
18.2	Legal Background.....	18-1
18.3	Cumulative Impacts.....	18-2
18.4	Potential Impacts.....	18-4
18.5	Landscape and Visual.....	18-6
18.6	Ecology and Nature Conservation.....	18-7
18.7	Archaeology.....	18-7
18.8	Cultural Heritage.....	18-7
18.9	Agricultural Land.....	18-13
18.10	Water Environment.....	18-14

18.11 Contaminated Land.....	18-14
18.12 Noise and Vibration.....	18-15
18.13 Air Quality.....	18-16
18.14 Traffic and Transport.....	18-16
18.15 Socio Economic.....	18-17
18.16 Summary	18.17

19 Schedule of Environmental Commitments

Prepared by CSJ Planning

19.1 Introduction.....	19-1
19.2 Landscape and Visual.....	19-2
19.3 Ecology and Nature Conservation.....	19-4
19.4 Archaeology.....	19-11
19.5 Cultural Heritage.....	19-12
19.6 Agricultural Land.....	19-12
19.7 Water Environment.....	19-13
19.8 Contaminated Land.....	19-18
19.9 Noise and Vibration.....	19-20
19.10 Air Quality.....	19-21
19.11 Traffic and Transport.....	19-22

20 Summary and Conclusions

Prepared by CSJ Planning

20.1 Introduction.....	20-1
20.2 Main Issues.....	20-1
20.3 Landscape and Visual.....	20-1
20.4 Ecology and Nature Conservation.....	20-3
20.5 Archaeology.....	20-5
20.6 Cultural Heritage.....	20-6
20.7 Agricultural Land.....	20-7
20.8 Water Environment.....	20-9
20.9 Contaminated Land.....	20-11
20.10 Noise and Vibration.....	20-13
20.11 Air Quality.....	20-13
20.12 Traffic and Transport.....	20-14
20.13 Benefits of the Development.....	20-14

20.14 Conclusion.....	20-15
-----------------------	-------

TABLES

The following tables are provided within Volume 1 of the ES.

Chapter 1 Introduction Tables

No Tables in this section to reference.

Chapter 2 Site Description and Surrounding Area Tables

No Tables in this section to reference.

Chapter 3 EIA Methodology Tables

Table 3.1 Literature review and Survey.....	3-2
---	-----

Table 3.2 Significance of the environmental effect.....	3-6
---	-----

Chapter 4 Development Proposals Tables

Table 4.1 Wiltshire Parking Standards.....	4-11
--	------

Chapter 5 Development Need and Alternative Tables

No Tables in this section to reference.

Chapter 6 Policy Tables

No Tables in this section to reference.

Chapter 7 Landscape and Visual Impact Tables

Table 7.1 Generic Landscape Designations.....	7-3
---	-----

Table 7.2 Sensitivity of Landscape Receptors.....	7-5
---	-----

Table 7.3 Magnitude of Landscape Impacts.....	7-7
---	-----

Table 7.4 Sensitivity of Visual Receptors.....	7-9
--	-----

Table 7.5 Magnitude of Visual Impacts.....	7-9
--	-----

Table 7.6 Matrix of Landscape or Visual Significance.....	7-14
---	------

Chapter 8 Ecology and Nature Conservation Tables

Table 8.1 Sunset/Sunrise Times and Weather Conditions for Dusk Emergence and Dan re-entry Bat Survey Work.....	8-14
Table 8.2 Sunset/Sunrise Times and Weather Conditions for the Manual Walked Transect Surveys.....	8-16
Table 8.3 Sunset/Sunrise Times & Weather Conditions for Remote Detector Surveys..	8-16
Table 8.4 Details of Timings and Weather Conditions of Great Crested Newts presence/absence Survey undertaken at the Site.....	8-20
Table 8.5 Survey Timings and Weather Conditions for Breeding Bird Surveys.....	8-21
Table 8.6 Results from the GCN's Presence/Likely Absence Surveys.....	8-50
Table 8.7 Ecological Resources Scoped In or Out of EIA Assessment.....	8-53

Chapter 9 Archaeology Tables

Table 9.1 Value of Heritage Assets.....	9-11
Table 9.2 Significance of Effects.....	9-13

Chapter 10 Cultural Heritage Tables

Table 10.1 Summary of significance of effects of impacts from the proposed development in relation to heritage and the historic environment, excluding below ground archaeology.....	10-61
--	-------

Chapter 11 Agricultural Land Tables

Table 11.1 the ALC grading system.....	11-6
Table 11.2 Scale of Impact on Agricultural Land.....	11-7
Table 11.3 Matrix for assessing effects on Agricultural units.....	11-8
Table 11.4 Local Climatic Factors.....	11-13
Table 11.5 Land areas by grade and sub grade.....	11-15
Table 11.6 Land Classification of rival sites.....	11-17
Table 11.7 Land Loss by ALC grade.....	11-21

Chapter 12 Water Environment Tables

Table 12.1 Extreme Flood Flow Estimates.....	12-19
--	-------

Table 12.2 Summary of the significance of the impacts in the pre-mitigation stage, the construction stage and following development (i.e. post mitigation).....	12-31
---	-------

Chapter 13 Contaminated Land Tables

Table 13.1 Impact Criteria.....	13-6
Table 13.2 Impact Magnitude.....	13-7
Table 13.3 Impact Significance.....	13-9
Table 13.4 Significance Levels.....	13-10
Table 13.5 River Quality.....	13-23
Table 13.6 Summary of Potential On-Site Contaminant Sources.....	13-27
Table 13.7 Summary of Potential Off-Site Contaminant Sources.....	13-28
Table 13.8 Magnitude and Significance of Impact.....	13-31
Table 13.9 Mitigation Measures.....	13-32
Table 13.10 Summary of the Residual Impact of the Proposed Development.....	13-34

Chapter 14 Noise and Vibration Tables

Table 14.1 Classification of the Significance of Effects.....	14-17
Table 14.2 Daytime Baseline Unattended Noise Monitoring Results.....	14-19
Table 14.3 Night-time Baseline Unattended Noise Monitoring Results.....	14-20
Table 14.4 Receptors.....	14-21
Table 14.5 Plant and Equipment – Construction Phase.....	14-23
Table 14.6 Predicted Worst-Case Construction Noise Level Range.....	14-24
Table 14.7 Distances at which vibration may just be perceptible.....	14-26
Table 14.8 Summary of AAWT Traffic Flows.....	14-30
Table 14.9 Summary of the Predicted Basic Noise Levels from Road Traffic Movements.....	14-31
Table 14.10 Summary of the Predicted Change in Noise Level.....	14-31
Table 14.11 Noise Limits at the Nearest Noise-sensitive Receptors for Electrical and Mechanical Plant.....	14-34
Table 14.12 Recommended Envelope Construction.....	14-39
Table 14.13 Recommended Enhanced Envelope Construction.....	14-39

Chapter 15 Air Quality Tables

Table 15.1 Comparison of Modelled and Monitored NO ₂ Concentrations.....	15-12
Table 15.2 Receptor Locations Used on ADMS Modelling.....	15-14
Table 15.3 Defining the Significance of Effects Associated with Construction Activities.....	15-15
Table 15.4 Criteria for Assessing Significance of Impact during Operational Phase of Development.....	15-16
Table 15.5 Diffusion Tube Monitoring Results.....	15-18
Table 15.6 Estimated Background Concentrations from DEFRA maps.....	15-20
Table 15.7 Summary of Dust Emissions Magnitude for Each Activity.....	15-21
Table 15.8 Summary of Sensitivity of Surrounding Receptors.....	15-25
Table 15.9 Summary of Dust Risk Effects to Define Site Specific Mitigation.....	15-26
Table 15.10 Predicted Annual Mean NO ₂ Concentrations at Existing Receptors.....	15-27
Table 15.11 Predicted Annual Mean NO ₂ Concentrations at Proposed Receptors.....	15-28
Table 15.12 Predicted Annual Mean PM ₁₀ Concentrations at Existing Receptors.....	15-29
Table 15.13 Predicted Annual Mean PM ₁₀ Concentrations at Proposed Receptors....	15-32
Table 15.14 Predicted Annual Mean PM ₁₀ Concentrations at Existing Receptors.....	15-33
Table 15.15 Predicted Annual Mean PM ₁₀ Concentrations at Proposed Receptors....	15-33

Chapter 16 Traffic and Transport Tables

Table 16.1 Significance Criteria for Transport.....	16-7
Table 16.2 Walking Distance to Local Facilities.....	16-13
Table 16.3 Chippenham Site Allocations.....	16-21
Table 16.4 Transport and Access Summary.....	16-29

Chapter 17 Socio-Economic Tables

Table 17.1 Key Data Sources.....	17-18
Table 17.2 Walking Distance to Local Facilities.....	17-22

Table 17.3 Office for National Statistics – Key Statistics – March 2011.....	17-24
Table 17.4 WIN Population Estimates and Forecasts for Chippenham, 2001-2021.....	17-25
Table 17.5 2011 Census Housing Type and Tenure.....	17-28

Chapter 18 Cumulative Effects Tables

Table 18.1 Des heritage assets and potential cumulative magnitude of impact.....	18-8
Table 18.2 Non designated heritage assets and potential cumulative magnitude of impact.....	18-12

Chapter 19 Schedule of Environmental Commitments Tables

Table 19.1 Schedule of Environmental Commitments.....	19-28
---	-------

Chapter 20 Summary and Conclusion Tables

No Tables in this section to reference

References

Please note. References are provided at the back of each individual chapter as required.