Redevelopment of Land to the North and West of Leicester Road, Rugby
Flood Risk Assessment

Castlemore Securities Ltd
September 2008
Redevelopment of Land to the North and West of Leicester Road, Rugby

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APPENDIX 1 – ENVIRONMENT AGENCY LETTER OF 9 NOVEMBER 2007
APPENDIX 2 – OUTLINE PLANNING PERMISSION

FIGURES
1 Introduction

1.1 Castlemore Securities Ltd have been planning the redevelopment of land located to the north and west of Leicester Road, Rugby since February 2006. Various planning applications have been submitted to Rugby Borough Council and approvals received for redevelopment of the site for retail purposes.

1.2 Faber Maunsell were appointed by Castlemore Securities Ltd to prepare Flood Risk Assessments (FRAs) which would be part of the supporting information for the planning applications. The FRAs were to be prepared in accordance with Planning Policy Guidance Note 25 (PPG25) or latterly Planning Policy Statement 25 (PPS25) and liaison was to take place with the relevant authorities.

1.3 Following an initial withdrawn outline application (with an FRA approved under PPG25) an outline planning application for Phase 1 of the development was submitted in July 2007 accompanied by an updated FRA issued in March 2007. Although this application was only for Phase 1 of the development, the FRA covered both Phase 1 and Phase 2 sites. The Environment Agency responded to this application on 9th November 2007 recommending approval, subject to the imposition of a number of consent conditions as part of the Phase 1 and Phase 2 sites fell within a floodplain (see letter in Appendix 1 to this document). Castlemore Securities Ltd agreed to the imposition of these conditions. (See conditions 9-15 of the planning permission in Appendix 2).

1.4 A full planning application for Phase 2 of the overall development was recently submitted to the Council who resolved to approve the application subject to confirmation by the Regional Government Office. This application was accompanied by an Addendum to the March 2007 FRA which considered mitigation measures for loss of floodplain and initial appraisal of surface water drainage requirements. It also included reference to the use of oil interceptors and was aimed at limiting conditions on Phase 2 to compliance with the contents of the FRA and the provision of a detailed drainage design.

1.5 As a result of the changing demands of the potential site, Castlemore Securities Ltd have decided to submit a new full planning application for the Phase 1 development. The full application is for a DIY unit and separate retail unit. The amount of retail floor space remains unchanged from the previous outline permission which was for a single DIY unit.

1.6 In effect this full application simply amends what has already been approved in order to “subdivide” the approved floor space. No additional retail floor space is created. All other elements of the scheme (such as car parking numbers, service yard layout, main access from Leicester Road, general design of the units, etc) remain generally the same.

1.7 This FRA includes the previous assessments made in March 2007 (Phase 1) and April 2008 (Phase 2). The previous Phase 1 assessment has been amended to include the latest layout plans and extracts from the Phase 2 assessment relating to the whole site have been included in Section 11 (Drainage). All other aspects of the flood risk assessment remain as previously approved. It is anticipated that the amended Phase 1 full application will be acceptable subject to similar consent conditions to those previously applied and accepted.

1.8 This document has been prepared by Faber Maunsell Limited (“Faber Maunsell”) for sole use of the Client detailed above in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between Faber Maunsell and the Client. Any information provided by third parties and referred to herein has not been checked or verified by Faber Maunsell, unless otherwise expressly stated in the Report. No third party may rely upon this document without prior and express written agreement of Faber Maunsell.
2 Site Location

2.1 The site is located in the urban, previously developed area of Rugby. It is situated to the north of Leicester Road (A426) and is between the Old Leicester Road to the east, Consul Road to the west and a branch of the Oxford Canal to the north which leads to Rugby Wharf. The location is shown in Figure 1 – Location Plan. The national grid reference for the mid-point of the site is SP 502 768. The area covered by the current proposal is approximately 4.67 hectares and this is shown in Figure 4.0 – Site Layout (area within the “Red Line” boundary). A further Phase 2 development may be proposed in the future and this is shown in Figure 4 as the area within the blue line (i.e. adjacent land in the same ownership).

2.2 Two Environment Agency ‘Main Rivers’ are relatively near to the site:–

- The River Avon is approximately 65 metres to the south of the site, on the opposite side of the A426 road.
- The River Swift is approximately 140 metres to the east of the Old Leicester Road.

2.3 A branch of the Oxford Canal is adjacent to the northern boundary of the site.

2.4 The site has previously been used for industrial purposes for over forty years (as evidenced on old maps) and is currently partly used and partly occupied by derelict buildings. It is not in an area where natural floodplains could be reinstated, or where significant flooding has been known to occur.

2.5 The Environment Agency’s Flood Map (which assumes that no flood defences are present) shows that none of the site is located in Flood Zone 3, i.e. the highest flood risk zone, and that the majority of the site is located in Flood Zone 1, i.e. the lowest flood risk zone, with annual probabilities of flooding of less than 0.1% (i.e. frequency of once in 1000+ years). A very small proportion of the site at the south-east corner, near the junction of Old Leicester Road and the A426, is shown as being within Flood Zone 2, having annual probabilities of flooding between 1% and 0.1% (i.e. return period of between 100 and 1000 years). An extract from the Environment Agency’s Flood Map is shown in Figure 2 – Flood Map. The Agency’s Flood Map is only indicative and hence it cannot be used as a totally definitive map of the floodplain. However, it does indicate levels of relative risk and where further investigation may be required.
3 Site Description and Redevelopment Proposals

3.1 The western part of the existing site is densely developed, off and around Forum Drive. The whole of this area is covered by buildings, roadways, and surfaced hard standings for storage and car/lorry parking. In effect it is almost totally impermeable and surface water runoff discharges to various on-site sewers and drains.

3.2 Some areas in the eastern part of the site are currently undeveloped and are covered by ruderal plant species, grasses, bushes and trees. There is dense vegetation between Old Leicester Road and the site’s eastern boundary. There is also a well established high hedge (and trees) between the northern boundary and the towpath alongside the Oxford Canal branch.

3.3 Existing site features are illustrated in the Photographs at the end of this report and are shown on Figure 3 – Existing Site Layout.

3.4 The redevelopment proposals are shown in Figure 4 – Proposed Site Layout. From this it can be seen that:

- There will be a smaller area occupied by buildings than at present.
- Floor levels of buildings will be well above the 1 in 100 year flood levels.
- Large areas of car parking and grassed areas will create landscaping opportunities and opportunities for using elements of Sustainable Drainage Systems (SuDS).
- Overall there are opportunities to reduce flood risk and to create more sustainable drainage systems.
4 Sources of Flooding

4.1 Five potential sources of flooding have been identified:

- River Avon
- River Swift
- Oxford Canal
- Public sewerage systems
- On-site drainage systems

4.2 A further possibility is a combination of the above sources.

River Avon

The River Avon, in the vicinity of the site, is in a deep cutting. At the time of the site visit (August 2006) water levels were estimated to be between 4 to 5 metres below the level of the main road (A426). This is clearly illustrated on the photographs, which also show the road bridges and surface water discharge points to the south of the development site. The River Avon has a catchment area of approximately 166Km² upstream of Rugby. The catchment extends as far as Naseby, to the east, to Walton in the north and to Crick in the south, with an extensive network of tributaries. The longest drainage path is approximately 30Km and the annual maximum rainfall (SAAR) is 659mm. (Information derived from the Flood Estimation Handbook (FEH)). If the water levels in the River Avon rose sufficiently then the site could be affected. However, the annual probability of flooding is thought to be less than 1% (as confirmed by the Environment Agency). The Agency has also pointed out that both the A426 (Leicester Road) and Old Leicester Road provide varying degrees of additional protection to the site.

River Swift

4.3 The River Swift is a tributary of the River Avon, which joins the River Avon approximately 150 metres to the east of Old Leicester Road. It has a catchment area of approximately 76Km² and a SAAR of 656mm. The catchment extends north-eastwards, beyond Churchover and Lutterworth, as far as Walton. If water levels exceeded bank levels along the western side of the river (i.e. the right-hand bank looking downstream) then flood water could possibly impact on the eastern end of the redevelopment site.

The engineered channels of the River Swift do not currently provide a 1 in 100 year standard of protection. Hydraulic modelling of both Main Rivers has been carried out by the Environment Agency. Data supplied by the Agency from the modelling results is used in later sections of this assessment.

Oxford Canal

4.4 The Oxford Canal is located adjacent to the northern boundary of the site. If overflow occurred over the southern side of the canal, water would flood into the northern parts of the site. However, this is very unlikely as consultations have revealed that flows in the Canal are controlled by a series of sluice gates located at Brownsover which enable high water flows to be diverted into storage lagoons. Hence water levels in the canal are kept at or below towpath levels. Two other features were noted at the time of the site inspection which also help to provide protection to the site. These were a 2 to 3 metre wide concrete wall structure in the wharf basin (approximately 1 metre above ground level) where the canal water levels were above average ground levels, and a 300mm raised ground level along the line of the existing hedge between the canal towpath and the site. The latter would prevent marginal overflows if the towpath did become flooded.
Public Sewerage Systems

4.5 Severn Trent Water is the sewerage undertaker in Rugby and separate foul and surface water sewers exist in Forum Drive. The foul sewers drain southwards to a pumping station south of the River Avon and the surface water sewers discharge to the River Avon. Blockages, collapses or malfunctioning flap valves could lead to flood waters affecting the site. However, sewer overflows on the site are unlikely to be deep and incidents are likely to be dealt with quickly by over-pumping, etc.

On-Site Drainage Systems

On-site drainage systems will connect to Severn Trent’s foul and surface water systems although some surface water sewers may discharge direct to the River Avon. At this stage a fully detailed drainage strategy has not been developed and no detailed drainage plans were available for this assessment. However, whatever systems are ultimately designed, blockages in the system could cause localised shallow flooding. The systems should be designed to take account of the impacts of climate change and to facilitate regular inspection and maintenance. Where possible, elements of SuDS should be included in the design and account should be taken of possible contamination of ground water. Although ground conditions on the site may not lend themselves entirely to the implementation of SuDS, it is envisaged that any issues arising will be easily resolvable when final drainage designs are prepared.
5.1 There are no raised flood defence structures on the River Avon in the vicinity of the site and the standards of protection will be determined by the hydraulic capacity of the river channel. The channel appears to be a two-stage one with low level banks, a berm and then banks up to the level of the A426. From the Environment Agency’s Flood Map it appears that the shaped channel, with its associated banks provides a standard of protection to the site of 1 in 100 years. Areas to the south and east of the site are in the 1 in 100 year floodplain (i.e. if the existing flood alleviation measures were not present, land would be more likely to flood to the south and east, rather than on the redevelopment site).

5.2 Defences along the River Swift are privately owned, and there is a weir shown on OS plans where the river joins the River Avon. The River Swift passes under the A426 Leicester Road approximately 150 metres to the east of the site. The hydraulic modelling carried out by the Environment Agency shows that the existing standard of protection provided by the defences may be less than 1 in 100 years, although the channel is described as being “oversized”.

5.3 The Environment Agency carry out regular inspections of the flood defences for which they are responsible and carry out strategic improvements, if required, as a result of Catchment Flood Management Plans. The retail park owners responsible for the River Swift defences have a vested interest in ensuring that they are well maintained and that they provide an adequate standard of protection. (Failure or frequent flooding would impact on Elliots Field Retail Park). Hence, the existing flood alleviation measures are reasonable overall and should continue to be so for the foreseeable future (see Section 14 – Climate Change).

5.4 The type of development proposed is in the “Less Vulnerable” Flood Risk Vulnerability Classification in Table D2 of Planning Policy Statement 25 (PPS25). This is appropriate for Flood Zones 1, 2 and 3a, without application of the sequential test.

5.5 Overall, the River Avon defences are presently thought to provide a 1 in 100 year standard of protection although whilst the River Swift’s defences may not.
6 Flood Events

6.1 No evidence was found during this assessment of any significant flooding on the redevelopment site.

6.2 The Environment Agency is “unaware of any flooding problems at this site” and occupiers of existing buildings on the site indicated that the only flooding incidents which they had observed were from blocked road gullies (i.e. the flooding had been temporary, shallow flooding on estate roads).

6.3 Operators of Rugby Wharf also indicated that they had never experienced any problems with flooding at the wharf or along the canal towpath.

6.4 The Environment Agency state that the “closest recorded flood level for the Leicester Road area near the site was during Easter 1998. The flood level recorded was 84.06m AOD. This was taken from water level gauge at NGR SP5027076670”.

7 Local Hydraulics

7.1 Factors which influence local hydraulics and flooding in the vicinity of the site are:-

- Relative land levels in the surrounding area.
- Water levels in the River Avon.
- Water levels in the River Swift.
- Depths of existing public sewerage systems.

7.2 Levels on the site vary from approximately 93m AOD along the northern boundary to approximately 84.65m AOD in the south-east corner of the site. Floor levels of existing buildings range from 85.82m AOD to 88.01m AOD. At the junction of Leicester Road and Consul Road the ground level is 85.5m AOD, and at the junction of Old Leicester Road and the A426 the level is 85.74m AOD. Hence the natural fall across the site is from the north to the south-east. Forum Drive rises sharply northwards (i.e. a 4 metre rise in 130 metres) and Consul Road also rises steeply from the junction of Forum Drive to Rugby Wharf.

7.3 The Environment Agency have stated that the crest level of the Environment Agency defences along the River Avon is 83.88m AOD and that these defences will protect the site to a 1 in 100 year standard. They also state that the “theoretical” 1% annual probability flood levels that they have for the area of flooding near the site range from 85.13m AOD upstream of the site to 84.45m AOD immediately downstream of the site.

7.4 The Environment Agency have advised that modelled flood levels in the River Swift for a 1 in 100 year event near to the site could reach between 85.52m AOD and 85.75m AOD. At the confluence of the River Swift and the River Avon, the modelled flood level is 85.21m AOD.

7.5 The levels quoted in the preceding paragraphs indicate that the south-east corner of the redevelopment site may be at risk of flooding if events occur on the River Swift with a return period of 100 years or more. However, to reach the nearest corner of the site flood waters would have to flow through the existing Retail Park and they would be obstructed by existing buildings. It is not possible without expensive detailed hydraulic modelling to accurately predict flow paths but there appear to be sufficient open areas in the Retail Park for flood water from the River Swift to reach the application site. It appears that in the Phase 1 development no buildings will be constructed in the floodplain. The south-east corner of the car park and the surrounding grassed area may encroach into that area, but this should not create problems, subject to detailed levels, i.e. no raising of ground levels or shaping ground profiles in order to retain floodplain capacities and appropriate flow paths.

7.6 The potential situation could be mitigated by avoiding the construction of buildings in the area potentially affected by flooding, and by retaining ground levels as near as possible to those which currently exist, although it may be necessary (because of existing services) to raise some ground levels near the junction of Old Leicester Road. Any intrusions into the theoretical floodplain could be compensated by lowering levels in other parts of the site (i.e. the car park and grassed areas to the south-west) and regulated by the information required by the consent conditions to be attached to the outline planning permission.

7.7 From Severn Trent’s sewer records it appears that existing public sewers are over two metres deep, with gradients of 1 in 60. Hence, future connections should be possible and reasonable capacities exist to minimise the probability of flooding arising from surcharge in the sewer systems. A new drainage strategy for the site will have to be formulated with the agreement of Severn Trent and the Environment Agency.
8 Probabilities of Flooding

8.1 Taking into account the information supplied by the Environment Agency, the annual probability of the majority of the site being flooded by river water is less than 0.1% (i.e. the majority of the site is outside the theoretical or “inherent” 1 in 1000 year floodplain).

8.2 A small proportion of the site, in the south-east corner, could be flooded by water from the River Swift if events exceeded 100 year return period (i.e. an annual probability of flooding of 1% or less).

8.3 The probability of the site being affected by flood water from the Oxford Canal is so low that it can be discounted (see Section 15 – Residual Risk).

8.4 The annual probability of the site flooding from public sewerage systems and on-site drainage systems is likely to be less than 2% (i.e. less than once in 50 years) provided that the systems are regularly inspected and maintained. The new on-site drainage systems should be designed to cater for short duration, high intensity storms using paved areas and parking areas for temporary retention of surface water runoff. Allowances should be included in the design of the systems for increased peak rainfall which may arise as a result of climate change (i.e. 30% increase over the next hundred years as stated in Table B2 in PPS25). Elements of Sustainable Drainage Systems (SuDS) should be incorporated where possible. The design of the new on-site systems offers an opportunity to reduce the probability of surface water flooding and to construct a more sustainable drainage system than that which exists at present.
9 Topography

9.1 Ground levels vary within the redevelopment site from 93mAOHD to 84.65mAOHD. Average levels are approximately 86mAOHD.

9.2 Floor levels for new buildings are proposed as 86.35mAOHD. This is 600mm above the 1 in 100 year flood level (85.75mAOHD) in the River Swift, and over one metre above the corresponding figure given for the River Avon (85.13mAOHD).

9.3 The south-east corner of the site may contain a cycleway and footpaths (subject to approval of the Local Authority) but it will not contain structures which would impede the flow of flood waters in extreme events. Generally, the proposed layout in the south-east corner will be grassed areas, but ground levels may have to be raised marginally because of service diversions.

9.4 General land and road levels in the south-east corner of the site are shown in Figure 5 and cross-sections of the site are provided in Figures 6.1 and 6.2.
10 Impacts of Flooding

10.1 The majority of the site is not in a theoretical or “inherent” floodplain and this has been verified by detailed hydrological analysis and hydraulic modelling carried out by the Environment Agency.

10.2 The south-east corner of the site could, theoretically, be flooded from the River Swift, by events with a 1% annual probability. However, the impact of this type of event would be confined to traffic disruption on the Old Leicester Road and inconvenience to pedestrians and cyclists. Buildings on site are not likely to be affected if floor levels are set at 86.30m AOD.

10.3 The depth of the flood waters would depend on the amount of overflow from the River Swift. Whilst this river may not have flood defences to a 1 in 100 year standard, the presence of defences would reduce the volume discharged if overtopping occurred. The probabilities are that a relatively shallow stream of water would flow across the south-east corner of the site, from east to west into Leicester Road. Ponding is likely to occur in localised low spots, and water depths across Old Leicester Road may reach a maximum of 0.62 metres during a 1 in 100 year event. (Velocity head will be lost flowing across the Retail Park and some pathways may divert flood water into the River Avon).

10.4 The land use proposed in the redevelopment is within the “less vulnerable” category as proposed in Table D2 of the Planning Policy Statement 25 (PPS25), and no significant impacts on the development are envisaged. If the south-east corner of the site was affected, then other locations (such as the Retail Park to the east) would also be flooded and presumably the Environment Agency’s flood warning system would be activated. Traffic impacts on the A426 may be significant and the Highway Authority and the Police may be involved in ensuring the safety of traffic and pedestrians.

10.5 Shallow flooding could occur on site as a result of short duration and high intensity local rainstorms. This may create some nuisance and minor disruption if paved areas are temporarily flooded. However, no damage to property is likely and access to the site is likely to remain safe. This also applies to the situation if the south-east corner of the site if affected by flooding, assuming that the A46 is not seriously flooded.

10.6 The main entrance to the site will be located as shown on Figure 5 and this should not be affected by flood waters. A safe high level exit route to Consul Road will be provided for emergency purposes.
11     Drains

11.1 Plans showing the location of Severn Trent Water public sewerage systems in the vicinity of the site are provided in Figure 7 – Public Sewers.

11.2 The existing separate sewerage systems appear to be adequate to accept the flows from the existing development. However, the redevelopment will require a new drainage strategy to be developed with the agreement of Severn Trent Water and the Environment Agency.

11.3 This assessment does not include the detailed surface water drainage design of the proposed development. However, some consideration has been given to the extent of impermeable areas and the storm runoff therefrom. It appears, at this stage, that the overall area of buildings will be reduced, from approximately 14,140m² to 10,443m². However, large areas of car parking are proposed and the overall relative permeabilities will depend on the drainage systems used for these areas and the service areas. If possible, elements of SuDS should be introduced.

11.4 The Environment Agency may require the surface water drainage design to cater for a 1 in 100 year storm of five hours duration, with an allowance for climate change (i.e. + 30% on peak rainfall intensities). This should be achievable on site. However, final design will depend on the degree to which SuDS elements are included in the design. These should be used as appropriate, as should the use of “grey water” recycling techniques, e.g. re-use of roof water.

11.5 The proposed drainage system will be designed to ensure that there is no increase in discharges from the site to the receiving watercourses and no surcharging of any new drainage system during the worst case scenario (1 in 100 year) event.

11.6 Any increased runoff from hard standing areas will be attenuated to a 1 in 100 year standard, including for the effects of climate change (see Section 16.3).

11.7 The detailed surface water drainage designs will depend on the degree to which infiltration techniques and the use of SuDS are introduced. In this appraisal the following factors are considered:-

- The indicative surface water runoff from the Phase 2 area, before and after development.
- The indicative surface water runoff from the whole of the undeveloped site (i.e. current situation).
- The potential runoff from the combined Phases 1 and 2 of the development (without the introduction of infiltration measures).
- The indicative volumes of runoff storage which would be required for attenuation of storm runoff, water quality treatment and long term storage.
- The extent to which surface water runoff and storage volumes could be affected by the introduction of infiltration measures and other elements of SuDS.

11.8 It should be noted that the values derived in the following paragraph are only indicative. Precise calculations will only be possible when detailed design of the surface water drainage system is carried out.

**Current Surface Water Runoff from the Whole Site**

For the purpose of this analysis, a total area of 4.18ha has been considered: 3.52ha in Phase 1 and 0.66ha in Phase 2. The existing site has been divided into buildings, roads, hardstanding areas and trees/grassed areas. These have been allocated impermeability factors of:-

- Buildings - 0.9 (roofs)
- Roads - 0.85
- Hardstandings - 0.75
- Grassed areas - 0.20
Using these factors gives an equivalent impermeable area of 25,082m$^2$ (overall impermeability = 0.6 i.e. 60%).

Assume as before a 6 hour, 1 in 100 year event, with a depth of rainfall = 72mm

Average rate of runoff = $\frac{25,082 \times 72}{1000} \times \frac{1}{21,600} = 83.60 \text{ l/s} \text{ or } 20.0 \text{ l/s/ha}$

**Surface Water Flows From Developed Site – Phases 1 and 2**

Using the same impermeability factors as above, an equivalent impermeable area has been calculated as 29,862m$^2$ (overall impermeability 0.714 = 71.4%). This would give an average rate of runoff = $\frac{29,862 \times 72}{1000} \times \frac{1}{21,600} = 99.54 \text{ l/s} \text{ or } 23.8 \text{ l/s/ha}$

From the above it can be seen that, if no infiltration measures are introduced, an increase in surface water runoff from the site will occur. This will be an increase in the order of 19% above the existing rates (i.e. 23.8-20.0).

For a rainfall event producing a depth of 72mm, the extra volume of surface water runoff would be $344.16 \text{ m}^3$ – say $345 \text{ m}^3$ ($[29,862 - 25,082] \times 72 \frac{\text{mm}}{1000}$)

**Indicative Storage Volumes**

The following indicative figures have been calculated using methodologies outlined in the Environment Agency’s R & D Technical Report W5-074/A/TR/1 – Revision C. Data has been extracted from relevant tables and graphs. Basic parameters used were:

- Site area = 4.18ha
- Percentage impermeable area – original 60% - following development 71.4%.
- The PIMP used in the calculations was 71.4%, i.e. the redeveloped value.

Attenuation storage volumes based on PIMP and Q/A (see Appendix 1 of the R & D Report – Figures 7.7 to 7.8, and use $M_s 60, r$ characteristics)

$U_vol_{1yr} = 100 \text{ m}^3/\text{ha}$
$U_vol_{30yr} = 160 \text{ m}^3/\text{ha}$
$U_vol_{100yr} = 220 \text{ m}^3/\text{ha}$

Hence, basic storage volumes:-

$BSV_{1yr} = 100 \times 0.71 \times 4.18 = 296 \text{ m}^3$
$BSV_{30yr} = 160 \times 0.71 \times 4.18 = 475 \text{ m}^3$
$BSV_{100yr} = 220 \times 0.71 \times 4.18 = 653 \text{ m}^3$

**Note:** If roof water was discharged to soakaways, the factor 0.71 would be reduced and BSVs would be smaller.

Adjusted storage values would be:-

$ASV_{1yr} = 1.15 \times 296 \text{ m}^3 = 340 \text{ m}^3$
$ASV_{30yr} = 1.35 \times 475 \text{ m}^3 = 641 \text{ m}^3$
$ASV_{100yr} = 1.64 \times 653 \text{ m}^3 = 1070 \text{ m}^3$

**Note:** Storage volume rates taken from Figure 8.8 on p.79 of R & D Report.

Long term storage value:

$LTSF = 4 \text{ m}^3/\text{ha/mm}$ – see Figure 10 on p.81 of R & D Report based on Soil Type and PIMP
Initial sizing of Treatment Storage Volume:
Assume all car park runoff, plus service areas and site roadway runoff is treated.
Total area = 19,167m² i.e. 1.92ha

Soil runoff coefficient = 0.3 (SPR – from Appendix 1 of R & D Report – Figure 12).
5 year/60mm effective rainfall depth = 20mm – see Appendix 1, Figure 2

Treatment Volume = \[ T_{VOL} = \frac{9A_{60}}{(SPR + (1 - SPR) \cdot \beta \cdot PIMP)} \]

where \( \beta \) = proportion of impervious area requiring treatment

\[ = \frac{9.1.92.20 (0.3 + (1 - 0.3) \cdot 0.714)}{2} \]
\[ = 345.6 \cdot 0.76 \]
\[ = 262.6m^3 \text{ – say 263m}^3 \]

Introduction of Infiltration and/or SuDS

11.12 If all roof water was taken to soakaways, there would be a reduction in surface water runoff from impervious surfaces of approximately 30%. This would create similar percentage reductions in storage volume requirements. (It would also represent a 16.5% reduction from the pre-development values). If pervious surfacing was used for the car park area then assuming a change in permeability factors from 0.85 to 0.4, there would be a reduction of approximately 13.7% of surface water runoff and similar reductions in storage volume requirements. If both measures were introduced there would be a reduction of surface water runoff of 43.7% and the runoff volume would be 32.86% lower than the pre-development values.

11.13 Overall, the indicative assessments given above have shown that:-

- If surface water from all areas discharges to the public sewerage system after both phases of the development have taken place, there could be an increase in runoff of approximately 19% over pre-development rates.
- If infiltration techniques can be introduced there is the potential to reduce surface water runoff rates by a considerable amount, so that values could be considerably less than pre-development rates (by over 30%). Reductions in runoff could be achieved even allowing for the impacts of climate change.

11.14 The overall drainage strategy should take the above “indicative” factors into account and should be based on introducing as much soil infiltration (SuDS techniques) as is reasonably practical. If technically feasible, this approach could save costs on provision of large storage volumes. (These could, of course, be accommodated within the site as underground flood cells/tanks – as required). Infiltration capacity tests and application of micro-drainage runoff modelling methods are recommended, together with consideration of the use of “green roofs”, and any other appropriate SuDS techniques which could be used practically and economically in the layout of the proposed development.

11.15 It should be noted that the figures quoted above illustrate that when the detailed drainage designs are prepared, the attenuation storage volumes required will depend significantly on the extent to which SuDS techniques are introduced. Interception storage, rainwater harvesting, use of green roofs, use of soakaways, pervious surfacings, swales, etc can all help to reduce volumes and rates of surface water runoff and hence reduce the need for large runoff storage volumes. This will apply equally to both phases of the development. Hence, in the above paragraphs consideration has been given to the whole site area and to both phases of the development.
12 Displaced Water

12.1 The majority of the Phase 1 site is not in a floodplain. Only the corner of the car park could be intrusive into overland flood flows from the River Swift and this can be mitigated by local regrading and/or inclusion of flood cells.

12.2 In the Phase 1 development area there is a parcel of land along the Leicester Road frontage, near the south-west corner of the site which is adjacent to but just outside the floodplain. This area could be regraded so that it becomes part of the floodplain. If, on a level for level basis, the ground was lowered to an average of 85.3m, i.e. to the same level as the “lost” floodplain, then the volume created would be:

\[
\text{Area} \times \text{average depth} = (65 \times 5) \times (86.0 - 85.3) m^3 \\
= 325 \times 0.7 \\
= 227.5 m^3
\]

12.3 This shows that on a stand-alone basis sufficient compensatory floodplain volume can be provided for Phase 1 by regrading.

12.4 It may be advantageous to consider the loss of floodplain in the context of both phases of the redevelopment. The total volume displaced is 377.8 m\(^3\). However, 227.5 m\(^3\) can be replaced by regrading. This leaves approximately 150 m\(^3\) to be provided by underground tank/cells. This could easily be accommodated beneath the extensive car park area in the Phase 1 development. This car park also serves the Phase 2 development and hence it is not unreasonable to use it as suggested.

12.5 If for any reason it is not considered desirable or practical to regrade the area of land fronting Leicester Road, the whole of the compensatory volume could be provided under the car parking area. Along the boundary of the car park approximately 80m abuts the edge of the floodplain. Just over 800 m\(^2\) at an average depth of 0.45m would be required to give a volume of 377.8 m\(^3\). Hence a 10m wide strip of flood cells or tanks abutting the floodplain envelope would suffice.
13 Morphology

13.1 Surface water discharges from the site are minimal in comparison with flood flows in the Rivers Avon and Swift and therefore have no impact on the morphology of the receiving urban watercourses.

13.2 There are no significant environmental features associated with the redevelopment site. However, there are some well established hedges and trees along the side of Old Leicester Road and a mature hedge alongside the Oxford Canal. These should be retained where possible.

13.3 Opportunity exists to enhance the environment within the site by landscaping and planting of appropriate species of trees, plants and shrubs.
14 Climate Change

14.1 Climate change is predicted to increase the peak intensity of rainfall by 30% over the next hundred years. This will inevitably increase peak water levels in rivers and arterial drainage systems. PPS25 anticipates a 20% increase in peak river flows over the same period.

14.2 The design of the on-site drainage systems should take into account the potential impacts of climate change on peak rainfall intensities and pipes should be sized accordingly. Attenuation of flows may be required, depending on the final designs (see Section 11 for initial consideration of surface water drainage requirements).
15 Residual Risk

15.1 The residual risks which have been identified in this Assessment are:-

- Extreme events in the River Avon.
- Extreme events in the River Swift.
- Extreme events in the Oxford Canal.
- Blockages or collapses in public sewers.
- Blockages or collapses in on-site drainage systems.

River Avon – Extreme Events

15.2 The overall shape of the inherent floodplain (i.e. that which would exist if there were no flood defences) illustrates that flooding from the River Avon would occur upstream of the site, to the east, to the north-east and to the south of the site. Hence, in extreme events, such as those caused by blockages, flooding of these areas would help to protect the site. Blockages could occur between the supporting pillars of road bridges to the south of the site but rising water levels would tend to overflow banks to the south, rather than the north. With the majority of the site having levels above the 1 in 1000 year level in the River Avon, and floor levels being set at over 1 metre above the 1 in 100 year level, the site is unlikely to be affected by extreme events in this river.

River Swift – Extreme Events

15.3 Extreme event flood in the River Swift could marginally increase the volume and depth of water flowing over the south-east corner of the site. However, as floor levels of buildings are to be set at approximately 600mm above predicted 1 in 100 year levels, damage to buildings and their contents is unlikely.

Oxford Canal – Extreme Events

15.4 Extreme flows in the Oxford Canal will be dealt with by diversion of flows out of the canal well upstream of the development site. However, at the Rugby Wharf basin, the canal water is contained by concrete structures (walls and quays) which are approximately 1 metre above ground level. The retaining structures are between 2 to 3 metres wide and failures or breaches of them are very unlikely. The structures are close to Consul Road, at the southern end of the canal branch. If a breach did occur, water would flow southwards and westwards. Depths would be relatively shallow as the 1 metre head would be quickly lost. However, velocities may be relatively high, as land surface gradients in the area are quite steep. One obvious pathway for overland flows would be southwards, down Consul Road, and it is possible that some water would flood onto the site and exit across the car park and new entrance road. As a precautionary measure it would be advisable to keep the floor level of the proposed DIY warehouse at 86.30m AOD. Flooding from this type of breach scenario is highly unlikely because of the solid nature and width of the retaining structure at the wharf.

Blockages or Collapses in Public Sewers

15.5 Blockages and collapses in public sewerage systems can lead to localised flooding. However, these floods are usually shallow and dealt with promptly by over-pumping, diversion of flows, etc. The floor levels of the proposed buildings relative to the levels of the sewerage systems should ensure that there are no direct flooding impacts on the buildings from this type of incident.
Blockages or Collapses in On-Site Drainage Systems

15.6 Blockages in on-site drainage systems can be minimised by regular inspection and maintenance. If they do occur, the resultant flooding is likely to be shallow and it can usually be cleared quite quickly by rodding, or in extreme cases, by excavating and removing the blockage. Properties are unlikely to be damaged and flooding is more likely to occur on access roads, paved areas, etc.
16 Conclusions and Recommendations

16.1 As a result of this assessment the following conclusions have been reached:-

- This “brownfield” development site is in need of redevelopment for social, economic and environmental reasons.
- The site is not in a functional floodplain as defined in PPS25.
- The majority of the site is at negligible risk of flooding from river water, i.e. it is outside even the 1 in 1000 year flood envelopes of both the River Avon and the River Swift.
- The south-east corner of the site could be affected by flood water from the River Swift if flows in that river exceeded a 1 in 100 year frequency (i.e. <1% annual probability).
- The Oxford Canal does not present an appreciable flood risk to the site, as overflow of excess water into balancing lagoons occurs upstream.
- The annual probabilities of the site flooding from the various sources of flooding are:-
  - River Avon – less than 0.1% (less than once in 1000 years)
  - River Swift – majority of the site less than 0.1%, but south-east corner 1% (1 in 100 years)
  - Oxford Canal – negligible
  - Severn Trent sewers – 2% (1 in 50 years)
  - On-site drains and sewers – depends on design standards, but will probably be between 1 in 50 and 1 in 100 years, i.e. 2% to 1% annual exceedance probability.
- The proposed redevelopment is classified as “less vulnerable” in the vulnerability categories defined in PPS25.
- If the south-east corner of the site flooded it would be very unlikely to impact on any buildings. Flow paths would be across open grassed areas and footpaths.
- Displaced water is not a significant issue with this development, as the majority of the site is outside the floodplain.
- Impacts of short duration, high intensity localised storms are likely to be temporary and the site layout can be disguised so that flooding is confined to shallow flooding of car parks and service areas.
- There are no severe residual flood risks envisaged at this site. However, mitigation could be provided against the potential impacts of very low probability events by keeping floor levels of buildings at 86.35mAOD. The raised floor levels will also protect against localised on-site flooding.
- No evidence of significant flooding on the site has been discovered during this assessment.
- The on-site surface water drainage designs need to take account of the future impacts of climate change and a drainage strategy needs to be agreed with Severn Trent Water and the Environment Agency. The designs should include elements of sustainable drainage (SuDS) if possible.
- Surface water runoff from the development should have no morphological impacts on receiving water courses and there are no significant ecological features associated with the site. Mature hedges and trees should be retained if possible alongside the Oxford Canal and Old Leicester Road. Appropriate trees, bushes, plants, etc. should be planted, with appropriate landscaping to enhance the environment.
Overall Conclusion

16.2 Subject to the overall drainage design being acceptable to the relevant authorities and to the raising of floor levels to 86.3m AOD, the site will be protected adequately against the impacts of flooding for the next hundred years.

16.3 It is therefore recommended that:-

- Floor levels of the new buildings are set at 86.35m AOD or above.
- The south-east corner of the site should be developed in a manner which will not result in net loss of floodplain volume and which enables continuity of flood flow paths. The suggested consent conditions will ensure this.
- On-site drainage systems should be designed to allow for increased surface water runoff arising from the potential impacts of climate change.
- Detailed drainage designs should be agreed with the relevant authorities before development commences and they should include elements of SuDS where appropriate, plus runoff attenuation devices if necessary. These systems should be regularly inspected and maintained during the life of the development.
- Land drainage consent be obtained if any new surface water discharges from the site are proposed (e.g. to the River Avon).

Opportunities should be taken to enhance the environment on the site by planting of suitable trees and shrubs.
Rugby Borough Council
Development Control
PO Box 16
Rugby
Warwickshire
CV21 2LA

Our ref: UT/2007/102555/01-L01
Your ref: R07/1344/MAJP
Date: 09 November 2007

F.A.O. Steve Parkes

Dear Sir

REDEVELOPMENT OF LAND TO PROVIDE A DIY RETAIL STORE (6124SQM)
WITH ANCILLARY AREAS FOR THE DISPLAY AND SALE OF BUILDING
MATERIALS (929SQM) AND GARDEN CENTRE PRODUCTS (1394SQM)
TOGETHER WITH AN ACCESS ROAD AND ASSOCIATED CAR PARKING,
LANDSCAPING AND ANCILLARY WORKS

LAND NORTH AND WEST OF LEICESTER ROAD (TRIBUNE TRADING ESTATE)
RUGBY, WARWICKSHIRE CV21 1NT

Thank you for referring the above application which was received on 9th August
2007. This was followed by confirmation of the Flood Risk Assessment’s location on
the 19th October 2007.

The Environment Agency has no objection to the proposed development, however
wishes for the following comments to be taken into account, and conditions to be
imposed on any planning permission that may be issued:

Flood Risk
The Environment Agency has reviewed the supporting Flood Risk Assessment
(FRA) under taken for this site by Faber Maunsell / Aecom for Castlemore Securities
Ltd, which is dated March 2007.

It is considered that the FRA satisfactorily addresses the issue of flood risk on the
site, demonstrating that it is possible to develop the site without any adverse effect
on flooding, in line with guidance contained within Planning Policy Statement 25:
Development and Flood Risk (PPS25).

Environment Agency
Environment Agency, Sentinel House, Wellington Crescent, Fradley Park, Nr Lichfield, Staffordshire, WS13
8RR.
Customer services line: 08708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk
Cont’d..
CONDITION
Any development hereby approved by this permission shall be carried out in accordance with the Faber Maunsell / Aecom Flood Risk Assessment (March 2007).

REASON
To protect the development from the effects of flooding in line with PPS25.

The Environment Agency concur that from existing information, the majority of the proposed development site lies within Zones 2 and 1 as set out in Table D1 of PPS25. However, in line with the FRA it should be ensured that the land that lies within Flood Zone 2 will be left open and undeveloped, in order to ensure there is minimal risk of flood damage, and reduction in floodplain capacity. The FRA notes that that if ground levels are raised within this zone, floodplain compensation shall be negotiated with the Environment Agency in order to ensure that floodplain capacity is not reduced as a result of the development.

These are all issues which will be dealt with at the Reserved Matters planning stage, and they should be ensured through the imposition of the following condition:

CONDITION
No development shall take place in the floodplain as defined within Figure 4 of the Faber Maunsell / Aecom Flood Risk Assessment (March 2007) without prior written approval of the LPA

REASON
To protect the development from the risk of flooding, and to ensure there is no post-development risk of flooding to third party land in line with PPS25

It should also be ensured that the floodplain capacity is not reduced during the construction process. In light of this, we recommend the following condition:

CONDITION
There shall be no storage of construction materials within the floodplain as defined in Figure 4 of the Faber Maunsell / Aecom Flood Risk Assessment (March 2007)

REASON
To ensure that flood risk to third party land is not increased as a result of works on this site, and to protect against pollution of the water environment

Paragraph 9.2 of the FRA states that finished floor levels shall be set 600mm above the 1 in 100 year flood level of 85.74m AOD of the River Swift, and over 1 metre above the flood level of the River Avon (85.13m AOD).

CONDITION
Finished floor levels shall be set at a minimum of 86.35 metres Above Ordnance Datum

REASON
To protect the development from the effects of flooding

The FRA indicates that the site will be drained using sustainable drainage techniques (SuDS) where possible, taking into account the effects of climate change.

Cont/d..
It is also stated in paragraph 10.5 that ‘shallow flooding may occur on site’. Further details of the drainage scheme are required to demonstrate that any surface flooding will be of an acceptable depth and location. As such, the full drainage scheme should be submitted for approval, preferably under cover the following condition:

**CONDITION**  
No development approved by this permission shall be commenced until a scheme for the disposal surface run-off has been approved by the Local Planning Authority. This scheme shall include the use of SuDS techniques, and shall take the effects of climate change into account. The development shall be implemented in accordance with the approved details.

**REASON:**  
To prevent pollution of the water environment.

The proposed on site surface water drainage system should be designed to the Sewers for Adoption (6th Edition), 30 year standard or similar. However, details must also be provided to confirm that surface water will not leave the proposed site in the 100 year 20% (for climate change) event. If the system surcharges, we may require additional space to be made for water, the location of any surcharging should be identified as should any resultant overland flood flow routes. Any excess surface water should be routed away from any proposed or existing properties. Drainage calculations must be included to demonstrate this (e.g. MicroDrainage or similar package calculations), including the necessary attenuation volume, pipeline schedules, network information and results summaries.

Adoption and future maintenance of the proposed surface water scheme should also be addressed.

This system should include all aspects of SuDS systems, in order to treat and retain pollutants arising from the site, in addition to suitably managing surface run-off. The SUDS approach involves using a range of techniques including soakaways, infiltration trenches, permeable pavements, grassed swales, ponds and wetlands to reduce flood risk by attenuating the rate and quantity of surface water run-off from a site. This approach can also offer other benefits in terms of promoting groundwater recharge, water quality improvement and amenity enhancements. Approved Document Part H of the Building Regulations 2000 sets out a hierarchy for surface water disposal which encourages a SUDS approach.

The development layout and design proposed under the Reserved Matters should take the requirements of SuDS techniques into account and incorporate all the recommendations outlined in the FRA.

**Contaminated Land**  
The Environment Agency has reviewed the following reports which were submitted in support of this application:-

1) Baseline Study 36060/BS (July 2006).
2) Addendum to Baseline Study 36060/BS/ADD (October 2006).

We would like to make the following comments relating to the proposed site investigation:
1. The proposals for the site investigation appear to be acceptable for an initial phase of investigation. It would be helpful to know the purpose of each sampling location, i.e. what is being targeted, which should be based on information in the Baseline Study relating to potential sources of contamination. It is likely that further investigation will be required post-demolition in order to fill in any "gaps" in data and to provide coverage for the building footprints.

2. We note that some of the boreholes are to penetrate at least 4m into the Lower Lias. Please refer to our previous comments regarding the possible presence of limestone bands that could act as preferential pathways for migration.

3. A number of contaminants which are shown in Tables 1 and 2 "Potential Contaminants" are missing from the chemical analysis suite: sulphide, sulphate, dieldrin, herbicides and a, b, g - hexachlorocyclohexane. Acetone should also be included in the VOC suite.

4. We note that three weekly groundwater monitoring visits are planned following the site investigation. This should include pre-existing wells where possible. Further monitoring is likely to be required in the future so the wells should be protected from being damaged or lost.

5. Results of water monitoring should be compared to UK Drinking Water Quality Standards, Environmental Quality Standards (EQS) for freshwater, and/or background concentrations.

In light of the above, the Environment Agency have no objections to the proposed development, subject to the imposition of the following conditions on any permission granted.

**CONDITION:**
Prior to the commencement of development approved by this planning permission a scheme to deal with the risks associated with contamination of the site shall be submitted to and approved by the Local Planning Authority. That scheme shall include all of the following elements.

- a) A desktop study identifying
  - All previous site uses
  - Potential contaminants associated with those uses
  - A conceptual model of the site indicating all potential contaminant sources, pathways and receptors
  - Potentially unacceptable risks arising from contamination at the site

- b) A site investigation scheme, based on (a) to provide information for an assessment of the risk to all receptors that may be affected, including those off site. This scheme should be submitted to, and approved in writing by the Local Planning Authority prior to that investigation being carried out on the site.

- c) The results of the site investigation and risk assessment (outlined in b) and a method statement based on those results detailing the remediation measures required and how they are to be undertaken.

- d) A verification report on completion of the works set out in (c) confirming the remediation measures that have been undertaken in accordance with the method statement and setting out measures for maintenance, further monitoring and reporting.

Cont/d..
Any changes to these agreed elements require the express consent of the Local Planning Authority.

REASON:
To ensure that the proposed site investigations and remediation will not cause pollution of Controlled Waters.

The site investigation scheme (b) must enable a risk assessment to be undertaken relating to groundwater and surface waters associated on and off the site that may be affected; a refinement of the conceptual model; and the development of a method statement detailing the remediation requirements. (c) should include measures to minimise the impact on ground and surface waters, using the information obtained from the site investigation.

CONDITION:
The development of the site shall be carried out in accordance with the approved Method Statement.

REASON:
To ensure that the development will not cause pollution of Controlled Waters.

CONDITION:
If during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Planning Authority for, an addendum to the Method Statement. This addendum to the Method Statement must detail how this unsuspected contamination shall be dealt with.

REASON:
To ensure protection of Controlled Waters.

Pollution Prevention
It is noted from the application form that it is proposed to incorporate 340 car parking spaces into the development. In light of the quantity and intensity of this parking provision, we recommend the following condition:

CONDITION:
Prior to being discharged into any watercourse, surface water sewer or soakaway system, all surface water drainage from parking areas and hardstandings shall be passed through an oil interceptor designed and constructed to have a capacity and details compatible with the site being drained. Roof water shall not pass through the interceptor.

REASON:
To prevent pollution of the water environment.

Where conditions have been imposed on the advice of the Environment Agency, details submitted in compliance with the conditions should be submitted to the Environment Agency for comment, before the conditions are discharged.

Finally, in order for the Environment Agency to monitor its effectiveness in Cont/d..
influencing the determination of planning applications, a copy of the decision notice (including conditions) for this application would be appreciated.

Yours faithfully

Miss Jane Field
Planning Liaison Officer

Direct dial 01543 404878
Direct fax 01543 444161
Direct e-mail jane.field@environment-agency.gov.uk
THE RUGBY BOROUGH COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED)
PLANNING PERMISSION

Notice is hereby given that the Borough Council in pursuance of its powers under the above mentioned Act, as amended and Rules, Orders and Regulations made there under, grants planning permission for the development referred to hereunder subject to the conditions also specified and in accordance with the plans and particulars submitted except insofar as may otherwise be required by the conditions.

APPLICATION NUMBER: R07/1344/MAJP

DATE OF APPLICATION: 19/07/2007

ADDRESS OF DEVELOPMENT:
Land North And West Of Leicester Road
(Tribune Trading Estate)
Rugby
Warwickshire
CV21 1NT

APPLICANT/AGENT:
Martin Robeson Planning Practise
21 Buckingham Street
London
WC2N 6EF

APPLICATION DESCRIPTION:
Redevelopment of land to provide a DIY retail store (6124 sq.m) with ancillary areas for the display and sale of building materials (929 sq.m) and garden centre products (1394 sq.m) together with an access road and associated car parking, landscaping and ancillary works.

CONDITIONS & REASONS/RELEVANT DEVELOPMENT PLAN POLICIES & PROPOSALS/REASON FOR APPROVAL:

CONDITION 1:
The development hereby permitted must be begun not later than the expiration of two years from the final approval of reserved matters or, in the case of approval on different dates, the final approval of the last such matter to be approved.

REASON:
To comply with Section 51 of the Planning and Compulsory Purchase Act, 2004.

CONDITION 2:
Application for approval of the reserved matters specified in Condition 3 below, accompanied by detailed plans and full particulars, must be made to the Local Planning Authority before the expiration of three years from the date of this permission.

REASON
To comply with Section 51 of the Planning and Compulsory Purchase Act, 2004.
CONDITION 3:
Details of the following reserved matters shall be submitted to and approved in writing by the Local Planning Authority before the development is commenced and shall be implemented, as approved, to the satisfaction of the Local Planning Authority:

a) The layout of the development on the site.

b) The scale of the development to include the height, width, and length of the building proposed in relation to its surroundings.

c) The appearance of the development including the external built form, its architecture, materials, decoration, lighting, colour and texture.

d) The hard and soft landscaping of the site including the design and treatment of all open spaces.

REASON:
To ensure that the details of the development are acceptable to the Local Planning Authority.

CONDITION 4:
Accommodation shall be provided in relation to the development hereby approved for the parking of no more than 340 cars together with accommodation for secure cycle parking and commercial vehicles and for the loading and unloading of vehicles in accordance with the Local Planning Authority's standards and detailed plans indicating the extent and position of such accommodation shall be submitted to and approved by the Local Planning Authority before the development is commenced.

REASON:
In the interests of public and highway safety and to ensure the details of the development are acceptable to the Local Planning Authority.

CONDITION 5:
The accommodation for car parking, cycle parking and the loading and unloading of vehicles required by condition 4 above shall be provided before the development is brought into use and shall be retained permanently for the accommodation of vehicles and cycles of persons working in or calling at the premises and shall not be used for any other purpose.

REASON:
In the interests of public and highway safety.

CONDITION 6:
Trees and shrubs approved in accordance with condition 3 above shall be planted no later than the first planting season following completion of the development and trees and shrubs so planted shall be properly maintained for the five years following planting with any failures being replaced during the following planting season.

REASON:
In the interests of the visual amenities of the locality.
CONDITION 7:

The existing trees and hedgerows identified for retention on plans approved in accordance with condition 3 above shall be protected from damage in accordance with the requirement of Section 7, BS 5837 : 2005 to the satisfaction of the Local Planning Authority during the period that development takes place.

REASON:

In the interests of the visual amenities of the locality and in the interests of the future health and amenity value of the trees.

CONDITION 8:

All hard landscaping, including the surface treatment of external areas, fencing, walls or other means of enclosure approved in accordance with condition 3 above, shall be completed before the development hereby permitted is brought into use.

REASON:

To ensure that the development is satisfactorily completed in the interests of the amenities of the locality.

CONDITION 9:

The development hereby permitted shall not commence until drainage plans for the disposal of surface water and foul sewage have been submitted to and approved by the Local Planning Authority. The scheme shall be implemented in accordance with the approved details before the development is first brought into use.

REASON:

To ensure that the development is provided with a satisfactory means of drainage as well as to reduce the risk of creating or exacerbating a flooding problem and to minimise the risk of pollution.

CONDITION 10:

Prior to being discharged into any watercourse, surface water sewer or soakaway system, all surface water drainage from parking areas and hardstandings shall be passed through an oil interceptor designed and constructed to have a capacity and details compatible with the site being drained. Roof water shall not pass through the interceptor.

REASON:

To prevent the pollution of the water environment.

CONDITION 11:

Any development hereby approved by this permission shall be carried out in accordance with the Faber Maunsell/Aecom Flood Risk Assessment (March 2007) submitted in support of the application.

REASON:

To protect the development from the effects of flooding in line with PPS25.

Cont...
CONDITION 12:

No development shall take place in the floodplain as defined within Figure 5 of the Faber Maunsell/Aecom Flood Risk Assessment (March 2007) without the prior written approval of the Local Planning Authority.

REASON:

To protect the development from the risk of flooding, and to ensure there is no post-development risk of flooding to third party land in line with PPS25

CONDITION 13:

There shall be no storage of construction materials within the floodplain as defined in Figure 5 of the Faber Maunsell/Aecom Flood Risk Assessment (March 2007).

REASON:

To ensure that flood risk to third party land is not increased as a result of works on this site, and to protect against pollution of the water environment.

CONDITION 14:

Finished floor levels shall be set at a minimum of 86.35 metres Above Ordnance Datum.

REASON:

To protect the development from the effects of flooding.

CONDITION 15:

No development approved by this permission shall be commenced until a scheme for the disposal of surface water run-off has been approved by the Local Planning Authority. This scheme shall include the use of SUDS techniques, and shall take the effects of climate change into account. The development shall be implemented in accordance with the approved details.

REASON:

To prevent pollution of the water environment.

CONDITION 16:

No development approved by this permission shall be commenced until a scheme to deal with the risks associated with contamination of the site has been submitted to and approved by the Local Planning Authority. Such scheme shall include all of the following elements:

a) A desk top study identifying all previous site uses; potential contaminants associated with those uses and using this information a diagrammatical representation (conceptual model) of the site indicating all potential contaminant sources, pathways and receptors and potentially unacceptable risks arising from contamination at the site.

b) A site investigation scheme, based on a) to provide information for an assessment of the risk to all receptors that may be affected, including those off site. This scheme should be submitted to, and approved in writing by the Local Planning Authority prior to that investigation being carried out on the site.

c) The results of the site investigation and risk assessment (outlined in b) and a method statement based on those results detailing the remediation measures required and how they are to be undertaken.

Cont...

IMPORTANT – PLEASE READ THE NOTES ATTACHED TO THIS FORM
d) A verification report on completion of the works set out in c) confirming the remediation measures that have been undertaken in accordance with the method statement and setting out measures for maintenance, further monitoring and reporting.

Any changes to these agreed elements require the express approval of the Local Planning Authority.

REASON:

To ensure that the proposed site investigations and remediation will not cause pollution of controlled waters.

CONDITION 17:

The development of the site shall be carried out in accordance with the method statement approved in accordance with condition 16 above.

REASON:

To ensure that the development will not cause pollution of controlled waters.

CONDITION 18:

If during development, contamination not previously identified is found to be present at the site, no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until either,

a site investigation has been designed and undertaken in accordance with details approved in writing by the Local Planning Authority; a risk assessment has been produced and a method statement detailing the remediation requirements using the information obtained from the site investigation has been approved by the Local Planning Authority or;

if the above has been previously undertaken, the developer has submitted and obtained written approval from the Local Planning Authority for an addendum to the method statement detailing how this unsuspected contamination shall be dealt with.

REASON:

To ensure that the development complies with approved details in the interests of protection of controlled waters.

CONDITION 19:

The DIY goods retail warehouse hereby permitted shall be only be used for retail sales within the following categories and for no other purpose (including any other purpose in Class A1 of the Schedule to the Town and Country Planning (Use Classes Order) 1987, as amended, or in any provision equivalent to that class in any statutory instrument revoking and re-enacting that Order). The categories are DIY goods for home improvement, maintenance, repair or decoration; DIY and builders merchant's products, including ironmongery, timber and plumbing goods; furniture; and goods for garden improvement and maintenance, including plants. Goods falling outside this range may be sold where they form an ancillary part to the main DIY operation of the store but are restricted to no more than 25% of the display area. Other goods may only be sold with the prior written approval of the Local Planning Authority.

REASON:

To limit the nature of the goods for sale to ensure that the development does not adversely impact on the vitality and viability of Rugby town centre.

Cont...
CONDITION 20:
The gross floorspace of the retail warehouse hereby permitted shall not exceed 6,124 square metres, plus a covered builders yard of not more than 929 square metres, and an open garden products area of not more than 1,394 square metres, and there shall be at no time any additional floorspace created whether by extension or internal alterations including installation of mezzanine floors or roofing of open yards, unless approved in writing by the Local Planning Authority.

REASON:
To ensure that the development does not adversely impact on the vitality and viability of Rugby town centre.

CONDITION 21:
The retail warehouse hereby permitted shall not be subdivided to create any additional independent retail units, unless having received prior approval in writing by the Local Planning Authority.

REASON:
To ensure that the development does not adversely impact on the vitality and viability of Rugby town centre.

CONDITION 22:
The development hereby permitted shall not be occupied until the proposed signalised junction as shown on drawing no. CS18622/T/16 Rev B has been fully implemented.

REASON:
In the interests of public and highway safety.

CONDITION 23:
The development hereby permitted shall not be occupied until a Framework Travel Plan, including details of the mechanism to be used for its delivery, monitoring and enforcement, has been submitted to and approved in writing by the Local Planning Authority, in consultation with the Highways Agency.

REASON:
To enable the M6 Motorway to continue to be an effective part of the national system of routes for through traffic in accordance with Section 10(2) of the Highways Act 1980 and to protect the interest of road safety on the Trunk Road.

CONDITION 24:
The building hereby permitted shall be constructed in accordance with the principles set out in Section 3 of the Energy Strategy Report by Hoare Lee dated November 2007 and received by the Local Planning Authority on 10th December 2007, and shall achieve a saving of a further 10% of carbon emissions over and above the requirements of Part L of the Building Regulations current at the time of commencement of development unless otherwise agreed in writing with the Local Planning Authority.

REASON:
In the interests of energy conservation.

IMPORTANT – PLEASE READ THE NOTES ATTACHED TO THIS FORM

Full Planning Approval
-CONDITION 25:

This permission shall relate only to the applicant's original drawings as revised by the applicant's additional drawing no. CS18622/T/16 Rev B received by the Local Planning Authority on 25th January 2008 and the applicant's amended drawings nos. 1763 - 30C and 1763 - 41C received by the Local Planning Authority on 21st February 2008.

REASON:

For the avoidance of doubt.

CONDITION 26:

Before the development hereby permitted is commenced an air quality assessment shall be undertaken by a competent air quality consultant and a report, which shall include any proposed works and/or mitigation measures shall be submitted to and approved by the Local Planning Authority. The works and/or mitigation measures so approved shall be fully implemented before the development hereby permitted is brought into use.

REASON:

In the interests of air quality.

CONDITION 27:

Prior to the commencement of development a BS 5228 noise survey and assessment by a competent noise consultant of the potential effect of construction work on the property, no.2 Consul Road, shall be submitted together with any proposed mitigation works for the written approval of the Local Planning Authority.

REASON:

In the interests of residential amenity.

CONDITION 28:

Full details of existing levels and the proposed finished floor level of the building and the finished levels of all external areas, together with sections, shall be submitted to and approved by the Local Planning Authority before development commences.

REASON

To ensure that the details of the development are acceptable to the Local Planning Authority and to take account of flood risk.

ADOPTED POLICIES:

UR3, PA6, PA11, PA13, QE3 and T2 of Regional Planning Guidance for the West Midlands (RPG 11), TC2 of the Warwickshire Structure Plan and S1, GP1, GP2, GP3, GP4, GP6, GP8, GP9, GP10, GP11, GP12, GP13, T1, T2, T3, T4, T5, T6, T8, ED6 and TCR2 of the Rugby Borough Local Plan, July 2006.

REASON FOR APPROVAL:

The site is located within the Rugby urban area and it is considered that there is no reasonable prospect of employment use continuing, resuming, or being attracted to the site whilst redevelopment as proposed will both generate employment and secure significant environmental improvements on a key gateway route into the town. A quantitative and qualitative need for a DIY store of the scale proposed has been established and the out-of-centre site is in a location which is acceptable both sequentially and in terms of sustainability. The accompanying illustrative drawings and supporting documentation demonstrate that a development of the nature and scale

Cont...
proposed can be satisfactorily accommodated on the site having regard to site constraints, access, highway and junction layout requirements, parking, servicing, access for all including those with impaired mobility, secure by design principles, energy conservation, drainage, flood risk and ground conditions/contamination. In addition there are no ecological constraints to the redevelopment of the site. The proposed development is therefore acceptable in principle in accordance with the relevant policies contained in the development plan and guidance contained in PPGs/PPSs.

INFORMATIVE 1:

The Council's Access Officer advises that any detailed submission should include a suitable Access Statement identifying and confirming the philosophy and approach adopted to inclusive design.

INFORMATIVE 2:

The applicant/developer is advised that before any work is carried out on site, in order to ensure that the construction of approved development schemes adheres to approved plans and complies with requirements of related planning conditions, not less than 7 days notice shall be given to the Rugby Borough Council’s Monitoring Officer Tel. 01788 533725 Fax 01788 533778.

INFORMATIVE 3:

Condition no. 23 is imposed on the direction of the Highways Agency.

INFORMATIVE 4:

If any protected species are uncovered or sighted during works, the Warwickshire Museum's Ecology Unit should be contacted immediately for further advice on the matter Tel. 01926 418060. Works should ideally be timed so as not to directly coincide with the bird breeding season. All breeding birds are protected under the 1981 Wildlife and Countryside Act, and it is therefore an offence intentionally or recklessly to kill, injure or disturb breeding birds.

INFORMATIVE 5:

Central Networks advise that the applicant/developer should contact them at an early stage and ensure that nothing is done to prejudice the security of the company's substation and that adequate provision is made at the developers cost to protect or divert any cables or overhead lines that may be affected by the scheme. Tel. 02476 185846.

INFORMATIVE 6:

The Environment Agency advises that the development layout and design proposed under the reserved matters should take the requirements of SuDS techniques into account and incorporate all the recommendations outlined in the Flood Risk Assessment which accompanied the application.

INFORMATIVE 7:

The Highway Authority (Warwickshire County Council) advises of the following:

a) During detailed design work consideration should be given to providing a staggered crossing on the access road to the site at the existing traffic signal junction as this will ensure that the junctions will work in 2022.

b) The three junctions will need to be linked to the County Council's Urban Traffic Control system and the existing traffic signal junction will need to be upgraded as part of the works. These works will need to include for the Controller, LED traffic signal heads, Puffin type nearside indicators, push button units and additional cables. This work may also require some traffic signal poles to be repositioned.

Cont...
The developer will be required to contribute £87,500 for the on-going maintenance and improvement works of the proposed and existing traffic signal junction. This will be included within the required Section 278 agreement (in line with note d)).

d) Condition 22 requires works to be carried out within the limits of the public highway. The applicant/developer must enter into a Highway Works Agreement made under the provisions of Section 278 of the Highways Act 1980 for the purposes of completing the works. The applicant/developer should note that feasibility drawings of works to be carried out within the limits of the public highway which may be approved by the grant of this outline planning permission should not be construed as drawings approved by the Highway Authority, but they should be considered as drawings indicating the principles of the works on which more detailed drawings shall be based for the purposes of completing an agreement under Section 278. An application to enter into a Section 278 Highway Works Agreement should be made to the Development Group, Warwickshire County Council, Environment and Economy Directorate, Shire Hall, Warwick, CV34 4SX.

INFORMATIVE 8:

This permission does not authorise the layout or the design of the development shown on drawing nos. 1763 - 41B and 1763 - 30B which are for illustrative purposes only.

INFORMATIVE 9:

With regard to condition 26, the Council's Head of Environmental Services should be contacted for guidance in relation to the required air quality assessment. The assessment should be based on the Design Manual for Roads and Bridges 1992 model, or more sophisticated model, and take account of traffic generation from the Rugby Station Area Development Framework sites and the proposed car park on Mill Road.

INFORMATIVE 10:

The Council's Head of Environmental Services advises that demolition work should only be carried out between the hours of 0800 - 1800 Monday to Friday, 0900 - 1600 on Saturdays and at no time on Sundays or Bank Holidays. Construction work must not occur outside the hours of 0730 - 1800 Monday to Friday, 0830 - 1300 on Saturdays and at no time on Sundays or Bank Holidays in order to reduce the likelihood of local residents being subjected to adverse levels of noise.

INFORMATIVE 11:

All refrigeration and air handling plant, if fitted, should be so designed, constructed, installed and operated so as not to cause nuisance to people living nearby or local businesses. Temporary generators, if used on the site during construction, should similarly be operated so as not to cause nuisance to neighbours.

INFORMATIVE 12:

Under the terms of the Water Resources Act 1991 and the Land Drainage Byelaws, the prior written consent of the Environment Agency is required for any proposed works or structure within 8 metres of the top of the bank of the River Avon, designated a "main river".

The development plan policies referred to above are available for inspection on the Rugby Borough Council’s website www.rugby.gov.uk or at the Council Offices.

Anna E. Rose
Head of Planning and Culture

DATE: 03/04/2008

PLANNING DEPARTMENT,
TOWN HALL,
EVREUX WAY,
RUGBY,
CV21 2RR

IMPORTANT – PLEASE READ THE NOTES ATTACHED TO THIS FORM

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NOTES

Other Legislation
This decision does not grant any right or approval under other legislation. You will have to apply separately for Building Regulations approval and for consent to undertake works, or place scaffolds, hoardings or skips within the highway.

Appeals to the Secretary of State
If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State for the Environment under Section 78 of the Town and Country Planning Act 1990.

If you want to appeal, then you must do so within six months of the date of this notice, using a form which you can get from the Planning Inspectorate at Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN Tel: 0117 372 6372, E-mail: enquiries@planning-inspectorate.gsi.gov.uk, Website: www.planning-inspectorate.gov.uk. The Planning Inspectorate have introduced an online appeals service which you can use to make your appeal online. You can find the service through the Appeals area of the Planning Portal – see www.planningportal.gov.uk/pcs. The Inspectorate will publish details of your appeal on the internet (on the Appeals area of the Planning Portal). This may include a copy of the original planning application form and relevant supporting documents supplied to the local authority by you or your agent, together with the completed appeal form and information you submit to the Planning Inspectorate. Please ensure that you only provide information, including personal information belonging to you that you are happy will be made available to others in this way. If you supply personal information belonging to a third party please ensure you have their permission to do so. More detailed information about data protection and privacy matters is available on the Planning Portal.

The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to him that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions it imposed, having regard to the statutory requirements, to the provisions of the development order and to any directions given under the order.

In practice, the Secretary of State does not refuse to consider appeals solely because the local planning authority based its decision on a direction given by him.

Purchase Notices
If either the local planning authority or the Secretary of State for the Environment refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor can he render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

Compensation
In certain circumstances compensation may be claimed from the local planning authority if permission is refused or granted subject to conditions by the Secretary of State on appeal or on reference of the application to him.

These circumstances are set out in Section 114 and related provisions of the Town and Country Planning Act 1990.

Important Note
Please note that any works carried out without compliance with the conditions attached to this approval will be entirely at the risk of the persons involved and may result in formal actions being taken by the Local Planning Authority.

Additional Note
If you wish to discuss this decision please contact the Planning Department on 01788 533777/788.

IMPORTANT – PLEASE READ THE NOTES ATTACHED TO THIS FORM

Full Planning Approval
CASTLEMORE SECURITIES

PROJECT
LEICESTER ROAD, RUGBY
FLOOD RISK ASSESSMENT

FIGURE 1.0
LOCATION PLAN

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This Flood Map was Downloaded from the Environment Agency Website on the 22nd September 2008.

**Key**

- Flooding from Rivers or Sea Without Defences
- Extent of Extreme Flood
- Flood Defences

**Note:**

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**FIGURE 2.0**

Environment Agency Internet Flood Map

Client: CASTlemore Securities

Title: LEICESTER ROAD, RUGby FLOOD RISK ASSESSMENT

No. 60044630 / 3563 / 002 Rev. 00

Design: Clive Mason  MapInfo: Tom Hudson

Chk’d:  App’d:  Scale: Not To Scale

Date: September 2008
Note:
This Drawing Is Based on Dwg No 1763-P1-32A
Proposed Site Plan (Mar 2008) by Saunders
Architects.
FIGURE 7.0
LOCAL DRAINAGE NETWORKS

Client: CASTLEMORE SECURITIES
Project: LEICESTER ROAD, RUGBY FLOOD RISK ASSESSMENT

Note
This Drawing is Based on Sewer Record Plan by Severn Trent Water

Design: Clive Mason MapInfo: Tom Hudson
Chk’d: . App’d: .
Date: September 2006 Scale: Not To Scale
Rev: No. 50258 / IPER / 007 00

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