

The Network Rail Cambridge South Infrastructure Enhancement Order

Response to Inspector's Adjournment Note 4.

1 Introduction

- 1.1 This note is prepared in response to the Inspector's Adjournment Note 4 (INQ 77). It relates to additional amendments made to Article 35 of the draft Order (INQ 71). A copy of the proposed Article 35 is attached at Appendix 1 to this note. This note uses the same defined terms as set out in paragraph (7) of Article 35 of the draft Order (and the draft Order generally).
- 1.2 As set out in the Explanatory Memorandum (INQ 72) to the Order, the purpose of paragraphs (4) to (7) of Article 35 is to acknowledge that the authorised works could compromise full compliance by surrounding landowners with certain planning conditions related to the specific planning permissions identified in the Article. In the event that the authorised works do conflict with one of the identified landowners' ability to comply with the identified planning permission then it prevents the local planning authority from enforcing the breached planning conditions against the affected landowner.
- 1.3 The local planning authority (Cambridgeshire City Council) has reviewed Article 35. It confirmed at the inquiry that it was content with the principles of Article 35 insofar as it related to the identified AstraZeneca permission and University permission (as defined in Article 35). Following the session at the public inquiry which considered the inclusion of Article 35, the wording was amended to accommodate points raised by the Council at the hearing. These additional amendments to the AstraZeneca and University permissions have been agreed by both the Council and the affected landowners.
- 1.4 Discussions to resolve objections made on behalf of Countryside Cambridge One Limited and Countryside Cambridge Two Limited (Countryside) and Cambridge Medipark Limited and CBC Estate Management Company Limited (CBC/CML) continued following the inquiry session held to review Article 35.
- 1.5 Similar issues were raised by Countryside and CBC/CML regarding concerns as to the interface between the authorised works and existing planning conditions relating to their respective developments. Accordingly, the approach used in Article 35 is proposed to resolve the concerns and to assist in securing the withdrawal of their objections.
- 1.6 Discussions have taken place with the Council to identify the conditions which may be affected in terms of their interface with the authorised works with the Countryside permission and the identified CBC/CML permissions.
- 1.7 The Council has confirmed in its Statement to the Inquiry dated 18 March (INQ 70) at paragraph 10 that the drafting relating to the Countryside permission, along with the revised wording relating to the AstraZeneca permission and University permission is in an approved form (see also attached e-mail from the Council confirming the Countryside permission wording within Article 35 is agreed dated 24 February 2022 (Appendix 2)). Therefore, on the basis that the inclusion of these three permissions is agreed by the Council, this note does not provide any further justification in relation to those three consents, which for the avoidance of doubt includes the Countryside permission.

- 1.8 The Council has however expressed that it does not consent to the inclusion of the "CBC/CML permission 1" and "CBC/CML permission 2" (together for the purpose of this note the "CBC/CML permissions") within Article 35. The purpose of this note is to respond to the Inspector's request for further justification for inclusion of the CBC/CML permissions (and identified conditions) within Article 35.

2 The CBC/CML Permissions¹

- 2.1 This section identifies the planning permissions and relevant planning conditions which CBC/CML has identified to the Applicant it has requested be included in Article 35 of the Order – this forms part of its requirements in order to withdraw its objection to the Order.
- 2.2 The CBC/CML permissions and conditions which are referenced in Article 35 are as follows:
- "The CBC/CML permission 1"
- 2.3 This is an outline planning permission granted by Cambridge City Council on 2 April 2015 and given reference number 14/1691/S73 for:
- "Section 73 to vary condition 63 of planning approval 06/0794/OUT for: up to 215,000sqm floorspace (excluding plant areas) comprising 60,000 sqm of clinical research and treatment (D1 and/or clinical in-patient treatment) 115,000sqm of biomedical and biotech research and development (B1(b)); 15,000sqm of biomedical and biotech research and development (b1(b)) or clinical research and treatment (D1 and/or clinical in-patient treatment) and 25,000sqm of either clinical research and treatment (D1 and/or clinical in patient treatment) or higher education or sui generis medical research institute uses, and including related support activities within use classes A1, A3, B1, D1 (creches/nurseries) or sui generis uses, with no individual premises used for support activities to exceed 500sqm; new areas of public realm, landscaping, parking areas, highway works, drainage works and all other associated infrastructure."*
- 2.4 The planning conditions from which Article 35 seeks to remove enforcement action are:
- 2.4.1 Condition 15: compliance with the Site Wide Nature Conservation Management Plan dated September 2020;
- 2.4.2 Condition 16 Reserved matters to accord with the Nature Conservation Management Plan and ecological measures to be carried out in accordance with the approved details and timing of delivery.
- 2.4.3 Condition 17: compliance with the Cambridge Biomedical Campus Extension Surface Water Strategy Report dated 20 October 2011;
- 2.4.4 Condition 18: requirement for reserved matters to include a detailed surface water strategy and compliance with approved details.
- 2.4.5 Condition 19: compliance with the Groundwater Assessment Report Cambridge Biomedical Campus September 2011.

¹ Please refer to the respective planning permission for the detail of each conditions, this note provide a high level of summary of main principles only and should not be relied on as providing full details of the condition wording.

- 2.4.6 Condition 20: compliance with the Cambridge Biomedical Campus Hydraulic Modelling Report dated August 2010;
- 2.4.7 Condition 21: compliance with identified plans relating to proposed foul drainage layout, proposed route of plumbing main, infrastructure and external serviced details sheet (foul water) General arrangement of pumps and pump station compound details.
- 2.4.8 Condition 24: compliance with the approved remediation strategy;
- 2.4.9 Condition 25: no further works to take place which would prejudice works carried out under the approved scheme of remediation.
- 2.4.10 Condition 26: compliance with the approved Materials Management Plan document.
- 2.4.11 Condition 27: notification and remediation proposals to be implemented as approved where unexpected contamination is identified.
- 2.4.12 Condition 28: requirements to be complied with if a generator is installed.
- 2.4.13 Condition 29: submission of and compliance with approved details relating to demolition/construction noise and vibration associated with development of a reserved matters parcel.
- 2.4.14 Condition 30: piling method statement to be submitted where proposed for a reserved matters application to cover certain matters, and thereafter complied with.
- 2.4.15 Condition 31: within each reserved matters application details of cycle and pedestrian facilities along the northern site boundary to provide pedestrian and cycle connectivity to Dame Archer Way to be provided and thereafter complied with.
- 2.4.16 Condition 32: compliance with approved off-plot cycle and pedestrian facility provision.
- 2.4.17 Condition 33: car parking provisions for any biotech or biomedical research development use to be provided at a ratio of 1 space for every 80 metres of gross floor area.
- 2.4.18 Condition 34: car parking provisions for employees of any clinical research and treatment or higher education or sui generis to be provided at a ratio of 1 space every 72 square metres gross floor area.
- 2.4.19 Condition 35: car parking for patients and visitors for clinical research and treatment or higher education or sui generis medical research institute to be provided at a ratio of 1 space for every 773 square metres of gross floorspace.
- 2.4.20 Condition 36: disabled car parking spaces to be at least 5% of the total number of spaces provided.
- 2.4.21 Condition 37: provides requirements relating to the provision of cycle parking spaces.
- 2.4.22 Condition 38: compliance with approved site wide ecological conservation management plan.
- 2.4.23 Condition 39: compliance with approved ECMPL submitted with each reserved matters application.

- 2.4.24 Condition 40: requirements relating to archaeology and compliance with the approved written scheme of investigation.
- 2.4.25 Condition 41: surface water drainage strategy for each reserved matters application to then be complied with as approved.
- 2.4.26 Condition 42: details for long term maintenance and arrangements for any surface water drainage system which will not be adopted to be submitted and approved by the Council and thereafter complied with as approved.
- 2.4.27 Condition 43: submission and compliance with a sustainability statement which is consistent with the approved Turley Associated Bespoke Sustainability Strategy.
- 2.4.28 Condition 44: review of the Bespoke Sustainability Strategy every 3 years, to be submitted to and approved by the Council.

"The CBC/CML permission 2"

- 2.5 This outline planning permission was granted by Cambridge City Council on 5 September 2017 and given reference number 16/0176/OUT for:

"Development of up to 75,000 sqm of floorspace (excluding plant areas) of Research and Development B1(b) and Clinical (C2 and/or D1), sui generis and higher education uses including related support activities within use class B1; ancillary uses in addition (A1, A3, A4, A5 and D1, and/or D2): up to two multi-storey car parks; open space and landscaping and all other associated supporting infrastructure".

- 2.6 The planning conditions from which Article 35 seeks to remove enforcement action are:
- 2.7 Condition 32: provisions of the pedestrian and cycle connections in accordance with the approved details and phasing.
- 2.8 Condition 38: provisions of species and habitat protection, enhancement restoration and creation measures to be carried out in accordance with the approved Site Wide Ecological Conservation Management Plan submitted and approved pursuant to the requirements of condition 38;
- 2.9 Condition 49: provision of landscaping in accordance with the approved landscaping schemes approved as part of each reserved matters application.

3 Justification for inclusion of CBC/CML permissions

- 3.1 The important distinction between the inclusion of the CBC/CML permission and AstraZeneca and University permissions is that it only relates to any breaches which occur within the Order limits (as identified on the relevant order plans.) The scope of Article 35 is therefore limited.
- 3.2 The conditions identified in relation to CBC/CML permissions are on the basis that they impose site wide requirements principally relating to drainage and nature/ecology/landscaping matters. The detailed design of the authorised works, particularly in relation to detailed landscaping and drainage elements are to be developed. At this stage CBC/CML has therefore identified planning conditions where there could be an interface with details to be submitted and worked up as part of the authorised works. Until further detail on potential interfaces is therefore known, CBC/CML require the protections afforded under Article 35.

- 3.3 The Applicant would emphasise that the inclusion of the identified CBC/CML permissions and conditions does not provide an automatic exemption for CBC/CML from enforcement action. It is only if the authorised works prevents CBC/CML from complying with a planning condition on either of the consents, and that a breach of that condition occurs in relation to land within the Order limits, that CBC/CML is afforded protection from enforcement.
- 3.4 Therefore, any breach within the Order limits not caused as a consequence of the authorised works, or any breach of any sort outside the order limits, remains capable of being enforced by the Council in the usual way.
- 3.5 The nature of possible interface issues can more aptly be explained in relation to the following landscaping and drainage related conditions:

CBC/CML permission 1 - PP 14/1691/S73 dated 2 April 2015 (landscaping and drainage):

- (a) condition 15 (site wide Nature conservation Management Plan) – the authorised works conflict with Phase 1 of this consent. There will need to be an assessment, how the authorised works will affect issues such as pollution/ wildlife/ drainage requirements set out in the approved plan.
- (b) condition 17 (strategic suite surface water) – it is likely that the new station will have impact on previously approved Phase 1 drainage details.
- (c) condition 20 (surface water modelling) Compliance with Hydraulic Modelling Report – the station/ works could interface with drainage infrastructure constructed as part of Phase 1, but no entirely in keeping with the approved reports.
- (d) condition 21 (Foul water)- same issue as identified in paragraph (c) above.
- (e) condition 42 (Landscaping Site Wide Scheme) Drawing 1777/C42/0001C is attached at Appendix 7. There is a need to allow for any differences in landscaping treatment between this plan and a scheme which may be approved relating to the authorised works.
- (f) condition 43 is relevant to condition 42 because it deals with the replacement and maintenance of such features within the 5 year period (which should not apply if CBC/CML are unable to comply with the maintenance requirements as a consequence of the authorised works.).
- (g) condition 44 (Structural Landscaping Management Plan) –to the extent the authorised works are inconsistent with the approved plan.

3.6 CBC/CML permission 2:6/0176/OUT dated 5 September 2017:-

- (a) Condition 38 (Site Wide Ecology Plan) – There will need to be an assessment, how the authorised works will affect issues such as pollution/ wildlife/ drainage requirements set out in the approved plan.
- (b) Condition 49 (Landscaping) – similar to condition 43 (identified above) with the replacement and maintenance of such features within the 5 year period (which should not apply if CBC/CML are unable to comply with the maintenance requirements as a consequence of the authorised works.)

3.7 The Inspector's attention is drawn to the final draft planning conditions (INQ74). These conditions are in an agreed form with the Council and secure a series of measures which will mitigate and minimise any interface issues with surrounding developments. Principle conditions include:

- (a) Condition 2 and 3 – compliance with the approved detailed plans and agreed design principles.
- (b) Conditions 13 and 29 together secure the detailed landscaping treatment and bio-diversity net gain thereby ensuring the authorised works will provide the requisite mitigation and enhancement of biodiversity.
- (c) Condition 14- 16 – secure detailed drainage/surface water management provisions both during construction and operational phases.
- (d) Condition 34, 35 and 36 secures an arboriculture method statement and tree protection plan during construction and operational phases together with tree planting provisions.

4 Conclusion

4.1 In conclusion therefore:

- (a) The Council has agreed that Article 35 include reference to the Astrazeneca permission, Countryside permission and University permission, including the relevant conditions specified.
- (b) There is a need to include reference to the CBC/CML permission 1 and CBC/CML permission 2 for the reasons explained above. The consents secure a series of site wide strategies and the authorised works potentially will interface with those site wide matters which could result in non-compliance with previously approved details where those interfaces occur.
- (c) Article 35 does not automatically exempt the identified planning conditions to be exempt from enforcement notice if breached. Any breach is restricted a breach within the Order limits and has to be as a consequence of the carrying out of the authorised development.
- (d) The planning conditions properly secure all mitigation and other measures to be secured as part of the detailed design provision. The Council is responsible for discharging details submitted pursuant to the planning conditions and all mitigation will need to meet with the requirements sought by the Council.

4.2 There is no objection to the principle of what paragraph (4) to (7) of Article 35 secures, this was confirmed at the session considering Article 35 at the public inquiry, and subsequent representation made by the Council. It is considered that this note provides sufficient justification that Article 35 incorporates reference to the identified CBC/CML permissions. Accordingly, the Applicant requests that Article 35 be accepted in its current form for inclusion in the Order.

List of Appendices

- 1 Appendix 1 – Extract of Article 35 from draft Order
- 2 Appendix 2- E-mail dated 24 February 2022 from Council to Applicant confirming the wording relating to the Countryside permission for inclusion at Article 35 is agreed.
- 3 Appendix 3 - E-mails dated 3 March 2022 and 8 March 2022 from Applicant to Council containing amended Article 35 wording to include reference to the CBC/CML permissions
- 4 Appendix 4 – CBC/CML permission 1 reference 14/1691/S73 and site plan
- 5 Appendix 5 – CBC/CML permission 2 reference 16/0176/OUT and site plan
- 6 Appendix 6 – Cambridge Biomedical Campus Nature Conservation Management Plan and (Landscaping Site Wide Scheme) Drawing 1777/C42/0001C

Appendix 1

Extract of Article 35

(1) The AstraZeneca conditions, University conditions, Countryside condition and CBC/CML conditions have no effect within the Order limits.

(2) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the AstraZeneca permission (whether or not within the Order limits) from being carried out in accordance with any of the AstraZeneca conditions, then to that extent—

- (a) there is deemed to be no breach of the AstraZeneca conditions concerned, and
- (b) no enforcement action may be taken in respect of the development carried out under the AstraZeneca permission.

(3) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the University permission (whether or not within the Order limits) from being carried out in accordance with any of the University conditions, then to that extent—

- (a) there is deemed to be no breach of University conditions concerned, and
- (b) no enforcement action may be taken in respect of the development carried out under the University permission.

(4) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the Countryside permission (within the Order limits) from being carried out in accordance with the Countryside condition, then to that extent

- (a) there is deemed to be no breach of Countryside condition concerned, and
- (b) no enforcement action may be taken in respect of the development carried out under the Countryside permission.

(1) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the CBC/CML permission 1 and/or CBC/CML permission 2 (within the Order limits) from being carried out in accordance with the CBC/CML conditions, then to that extent

- (a) there is deemed to be no breach of CBC/CML conditions concerned, and
- (b) no enforcement action may be taken in respect of the development carried out under the CBC/CML permission1 and/or CBC/CML permission2.

(2) In this article—

“the AstraZeneca conditions” mean conditions 42 and 45 of the AstraZeneca permission;

“the AstraZeneca permission” means the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73 (amending the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT) with reserved matters approved by Cambridge City Council under the reference numbers 14/1633/REM, 19/1070/REM and 20/05027/REM and any subsequent permission under section 73 of the 1990 Act or any non-material amendment to any of those permissions and approvals;

“the CBC/CML conditions” means conditions 15 to 21 and 24 to 44 of the CBC/CML permission 1 and conditions 32, 38 and 49 of CBC/CML permission 2;

“The CBC/CML permission 1” means the outline planning permission granted by Cambridge City Council on 2 April 2015 and given reference number 14/1691/S73;

“The CBC/CML permission 2” means the outline planning permission granted by Cambridge City Council on 5 September 2017 and given reference number 16/0176/OUT;

“the Countryside permission” means the outline planning permission granted by Cambridge City Council on 6 August 2010 and given reference 07/620 OUT with reserved matters 15/1829/REM and any further S73 permission under section 73 of the 1990 Act or any non-material amendment to those permissions and approvals;

“the Countryside condition” means condition 11 of the Countryside permission;

“the University conditions” means mean conditions 42 to 47 of the University permission; and

“the University permission” means the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73 (amending the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference 06/0796/OUT), together with reserved matters approved by Cambridge City Council under reference number 16/0653/REM and any subsequent permission under section 73 of the 1990 Act or any non-material amendments approved in relation to any of the aforementioned permissions and approvals.

Appendix 2

Archived: 18 May 2022 12:00:28

From: [Keith Barber](#)

Mail received time: Thu, 24 Feb 2022 14:56:55

Sent: Thu, 24 Feb 2022 14:57:37

To: [Vas, Michele](#) [Charlotte Burton](#)

Subject: RE: CSIE [DEN-UK_ACTIVE.FID9056300]

Importance: Normal

Sensitivity: None

Attachments:

[~WRD0001.jpg](#) 

[WARNING: EXTERNAL SENDER]

Michele,

I am e-mailing following instructions from Charlotte i.e. *not* the Countryside arm.

Charlotte and I are happy with the introduction of the extra text you are proposing to have drafted into Article 35 relative to the Countryside permission which is highlighted in yellow below. On her return Charlotte will check the consents/condons are as specified, ensure all are covered off (that there are no others) and there are no unintended consequences of disapplying the condons.

Does this give you sufficient to press for the time being with just that caveat?

Regards.

Keith

[Keith Barber](#)

Senior Planning Lawyer

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Ref: CCC-APP020130/01086435

From: Vas, Michele <michele.vas@dentons.com>

Sent: 22 February 2022 12:18

To: Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>; Keith Barber <Keith.Barber@3csharedservices.org>

Subject: CSIE [DEN-UK_ACTIVE.FID9056300]

Hi both

Keith – I spoke to Charlotte earlier regarding the concerns Countryside had regarding the ability to comply with their obligations to build out the Active Recreation Area as per the approved details – you may recall we did mention also on the call last week as something which could be covered of under Article 35.

I've taken a look through the planning docs supplied to me by their lawyers and have prepared an addition to Article 35 to cover this off and set out below the additional wording highlighted yellow. (just to flag following a session on Article 35 this morning with the inspector there are some additional amends to be made to the definition of the AstraZeneca and University permissions so they will be updated and I will send the proposed wording for those over shortly.

I have suggested the approach to Countryside's lawyers also so just waiting to hear back on whether this will alleviate their concerns – however would be good to just get your views on the suggested wording in the meantime.

As always – happy to discuss.

Kind regards

Michele

Planning Permission and supplementary powers

35—(1) Planning permission which is deemed by a direction under section 90(2A)([11](#)) (development with government authorisation) of the 1990 Act to be granted in relation to the authorised works is to be treated as specific planning permission for the purposes of section 264(3)(a) (cases in which land is to be treated as operational land for the purposes of that Act) of that Act.

(1) In relation to the application of paragraph 3(c) of the Second Schedule of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation Order) Regulations 1969([12](#)) (including that paragraph as applied by regulation 3(ii) of the Town and Country Planning (Tree Preservation Order) (Amendment) and (Trees in Conservation Areas) (Exempted Cases) Regulations 1975([13](#)), or as incorporated in any tree preservation order) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming the permission to have been granted on application made under Part 3 of that Act for the purposes of that Part.

(2) In relation to the application of article 5(1)(d) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Trees) Regulations 1999([14](#)) as incorporated in any tree preservation order or as having effect by virtue of regulation 10(1)(a) of those Regulations, any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall not be treated as an outline planning permission.

(3) In relation to the application of article 3(1) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation)(England) Regulations 2012 1975([15](#)), as incorporated in any tree preservation order or as having effect by virtue of regulation 7 of those Regulations or Section 193 of the Planning Act 2008([16](#)) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming permission to have been granted on application under regulation 17(1)(a) of those Regulations.

(4) The AstraZeneca conditions and University conditions have no effect within the Order limits.

(5) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the AstraZeneca permission (whether or not within the Order limits) from being carried out in accordance with any of the AstraZeneca conditions, then to that extent—

(a) there is deemed to be no breach of the AstraZeneca conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the AstraZeneca permission.

(6) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the University permission (whether or not within the Order limits) from being carried out in accordance with any of the University conditions, then to that extent—

(a) there is deemed to be no breach of University conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the University permission.

(7) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the Countryside permission (within the Order limits) from being carried out in accordance with the Countryside condition, then to that extent

(a) there is deemed to be no breach of Countryside condition concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the Countryside permission.

(8) In this article—

“the AstraZeneca conditions” mean conditions 42 and 45 of the AstraZeneca permission;

“the AstraZeneca permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73, with reserved matters approved by Cambridge City Council under the reference numbers 14/1633/REM, 19/1070/REM and 20/05027/REM and any further permission under section 73 of the 1990 Act

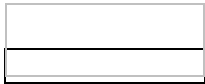
or any non-material amendment to any of those permissions and approvals;

“the University conditions” means mean conditions 42 to 47 of the University permission; and

“the University permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73, together with reserved matters approved by Cambridge City Council under reference number 16/0653/REM and any further permission under section 73 of the 1990 Act or any non-material amendments approved in relation to any of the aforementioned permissions and approvals.

"the Countryside permission" means the outline planning permission granted by Cambridge City Council on 6 August 2010 and given reference 07/620 OUT with reserved matters 15/1829/REM and any further S73 permission under section 73 of the 1990 Act or any non-material amendment to those permissions and approvals;

"the Countryside condition" means condition 11 of the Countryside Permission



Michele Vas

Counsel

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2010-EX#R

[\(1\)](#) Section 90(2A) was inserted by section 16(1) of the Transport and Works Act 1992 (c. 42).

[\(2\)](#) S.I. 1969/17

[\(3\)](#) S.I. 1975/148

[\(\[4\]\)](#) S.I. 1999/1892
[\(\[5\]\)](#) S.I. 2012/605
[\(\[6\]\)](#) 2008. c.29

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Appendix 3

Archived: 18 May 2022 12:11:00

From: [Vas, Michele](#)

To: [Vas, Michele](#)

Subject: FW: CSIE [DEN-UK_ACTIVE.FID9056300]

Importance: Normal

Sensitivity: None

Attachments:

[16_0176_OUT-DECISION_NOTICE-2201205.pdf](#) [14_1691_S73-DECISION_NOTICE-1726499.pdf](#) [16_0176_OUT-LANDSCAPE_MASTERPLAN-1867165.pdf](#)

From: Vas, Michele <michele.vas@dentons.com>

Sent: 08 March 2022 19:41

To: Keith Barber <Keith.Barber@3csharedservices.org>; Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>

Cc: John Pearson <johnpearson@schofieldlothian.com>; Humphrey Paul (Paul.Humphrey@networkrail.co.uk) <Paul.Humphrey@networkrail.co.uk>

Subject: RE: CSIE [DEN-UK_ACTIVE.FID9056300]

Hi both

Further to my e-mail last week CML/CBC have identified a further permission which will be affected by the CSIE works – permission 16/0176/OUT (Attached). I have checked it against the deposited plans and the order limits do just clip the masterplan area in the south west corner of the development site. (red line plan also attached).

I also attach a copy of the other outline planning permission which CML/CBC have referred to 14/1691/S73 which was previously raised in my e-mail of 3 March.

I have therefore further amended the wording below to include reference to the 2 CML/CBC affected permissions and highlighted the additional wording in green.

I think I have previously provided the countryside permissions which Countryside have also requested be excluded.

Unlike the AZ/UoC permissions – the exclusion wording for the CML/CBC and Countryside permissions only applies to land within the order limits, so everything else outside would still be enforceable in the usual way.

As mentioned I have been unable to move my meeting back to 11am so cannot now make a 10am meeting. I can do 4pm if that works?

Kind regards

Michele



Michele Vas

Counsel

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From: Vas, Michele <michele.vas@dentons.com>

Sent: 03 March 2022 13:02

To: Keith Barber <Keith.Barber@3csharedservices.org>; Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>

Subject: RE: CSIE [DEN-UK_ACTIVE.FID9056300]

Hi both,

I note that on our last exchange re the amendment to Article 35 to cover off the Countryside concerns that the Active Recreation Area could be impacted by the works, I sent over some wording to include them within the Article 35 exclusion.

We have since also had a request that CBC/CML would also like a similar carve out for their operative consent to the extent that the works again means that there is no compliance with the planning conditions again on landscaping matters. Unlike the University/AZ conditions, the exclusion has been limited only to the extent that this lies within the Order Limits rather than outside.

I have set out in blue highlighting below the additional amendments requested and also attach the planning permission which CML/CBC are requesting this relates to.

If you are able to confirm that this approach is also acceptable I would be grateful. Ideally I need to get the Order amended and submitted early next week so if you can confirm as soon as possible. As always, happy to talk through if that would be helpful.

Kind regards

Michele

Planning Permission and supplementary powers

35—(1) Planning permission which is deemed by a direction under section 90(2A)([11](#)) (development with government authorisation) of the 1990 Act to be granted in relation to the authorised works is to be treated as specific planning permission for the purposes of section 264(3)(a) (cases in which land is to be treated as operational land for the purposes of that Act) of that Act.

(1) In relation to the application of paragraph 3(c) of the Second Schedule of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation Order) Regulations 1969([12](#)) (including that paragraph as applied by regulation 3(ii) of the Town and Country Planning (Tree Preservation Order) (Amendment) and (Trees in Conservation Areas) (Exempted Cases) Regulations 1975([13](#)), or as incorporated in any tree preservation order) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming the permission to have been granted on application made under Part 3 of that Act for the purposes of that Part.

(2) In relation to the application of article 5(1)(d) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Trees) Regulations 1999([14](#)) as incorporated in any tree preservation order or as having effect by virtue of regulation 10(1)(a) of those Regulations, any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall not be treated as an outline planning permission.

(3) In relation to the application of article 3(1) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation)(England) Regulations 2012 1975([15](#)), as incorporated in any tree preservation order or as having effect by virtue of regulation 7 of those Regulations or Section 193 of the Planning Act 2008([16](#)) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming permission to have been granted on application under regulation 17(1)(a) of those Regulations.

(4) The AstraZeneca conditions, and University conditions, **CBC/CML conditions and Countryside condition** have no effect within the Order limits.

(5) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act

deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the AstraZeneca permission (whether or not within the Order limits) from being carried out in accordance with any of the AstraZeneca conditions, then to that extent—

(a) there is deemed to be no breach of the AstraZeneca conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the AstraZeneca permission.

(6) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the University permission (whether or not within the Order limits) from being carried out in accordance with any of the University conditions, then to that extent—

(a) there is deemed to be no breach of University conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the University permission.

(7) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the Countryside permission (within the Order limits) from being carried out in accordance with the Countryside condition, then to that extent

(a) there is deemed to be no breach of Countryside condition concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the Countryside permission.

(8) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the CBC/CML permission (within the Order limits) from being carried out in accordance with the CBC/CML conditions, then to that extent

(a) there is deemed to be no breach of CBC/CML conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the Countryside permission.

(9) In this article—

“the AstraZeneca conditions” mean conditions 42 and 45 of the AstraZeneca permission;

“the AstraZeneca permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73, with reserved matters approved by Cambridge City Council under the reference numbers 14/1633/REM, 19/1070/REM and 20/05027/REM and any further permission under section 73 of the 1990 Act or any non-material amendment to any of those permissions and approvals;

“the CBC/CML conditions” means conditions 15 to 21 and 24 to 44 of the CBC/CML permission 1 and conditions 32, 38 and 49 of CBC/CML permission 2;

“The CBC/CML permission 1” means the outline planning permission granted by Cambridge City Council on 2 April 2015 and given reference number 14/1691/S73

“The CBC/CML permission 2” means the outline planning permission granted by Cambridge City Council on 5 September 2017 and given reference number 16/0176/OUT

“the University conditions” means mean conditions 42 to 47 of the University permission; and

“the University permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73, together with reserved matters approved by Cambridge City Council under reference number 16/0653/REM and any further permission under section 73 of the 1990 Act or any non-material amendments approved in relation to any of the aforementioned permissions and approvals.

“the Countryside permission” means the outline planning permission granted by Cambridge City Council on 6 August 2010 and given reference 07/620 OUT with reserved matters 15/1829/REM and any further S73 permission under section 73 of the 1990 Act or any non-material amendment to those permissions and approvals;

“the Countryside condition” means condition 11 of the Countryside Permission



Michele Vas
Counsel

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From: Keith Barber <Keith.Barber@3csharedservices.org>

Sent: 24 February 2022 14:58

To: Vas, Michele <michele.vas@dentons.com>; Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>

Subject: RE: CSIE [DEN-UK_ACTIVE.FID9056300]

[WARNING: EXTERNAL SENDER]

Michele,
I am e-mailing following instructions from Charlotte i.e. *not* the Countryside arm.

Charlotte and I are happy with the introduction of the extra text you are proposing to have drafted into Article 35 relative to the Countryside permission which is highlighted in yellow below. On her return Charlotte will check the consents/condons are as specified, ensure all are covered off (that there are no others) and there are no unintended consequences of disapplying the condons.

Does this give you sufficient to press for the time being with just that caveat?

Regards.

Keith

Keith Barber
Senior Planning Lawyer
3C Shared Services – Legal Practice



Mobile: 07872 116527

Telephone: 01223 457098

E-mail - keith.barber@3csharedservices.org

Ref: CCC-APP020130/01086435

From: Vas, Michele <michele.vas@dentons.com>

Sent: 22 February 2022 12:18

To: Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>; Keith Barber <Keith.Barber@3csharedservices.org>

Subject: CSIE [DEN-UK_ACTIVE.FID9056300]

Hi both

Keith – I spoke to Charlotte earlier regarding the concerns Countryside had regarding the ability to comply with their obligations to

build out the Active Recreation Area as per the approved details – you may recall we did mention also on the call last week as something which could be covered of under Article 35.

I've taken a look through the planning docs supplied to me by their lawyers and have prepared an addition to Article 35 to cover this off and set out below the additional wording highlighted yellow. (just to flag following a session on Article 35 this morning with the inspector there are some additional amends to be made to the definition of the AstraZeneca and University permissions so they will be updated and I will send the proposed wording for those over shortly.

I have suggested the approach to Countryside's lawyers also so just waiting to hear back on whether this will alleviate their concerns – however would be good to just get your views on the suggested wording in the meantime.

As always – happy to discuss.

Kind regards

Michele

Planning Permission and supplementary powers

35—(1) Planning permission which is deemed by a direction under section 90(2A)([11](#)) (development with government authorisation) of the 1990 Act to be granted in relation to the authorised works is to be treated as specific planning permission for the purposes of section 264(3)(a) (cases in which land is to be treated as operational land for the purposes of that Act) of that Act.

(1) In relation to the application of paragraph 3(c) of the Second Schedule of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation Order) Regulations 1969([12](#)) (including that paragraph as applied by regulation 3(ii) of the Town and Country Planning (Tree Preservation Order) (Amendment) and (Trees in Conservation Areas) (Exempted Cases) Regulations 1975([13](#)), or as incorporated in any tree preservation order) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming the permission to have been granted on application made under Part 3 of that Act for the purposes of that Part.

(2) In relation to the application of article 5(1)(d) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Trees) Regulations 1999([14](#)) as incorporated in any tree preservation order or as having effect by virtue of regulation 10(1)(a) of those Regulations, any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall not be treated as an outline planning permission.

(3) In relation to the application of article 3(1) of the Form of Tree Preservation Order set out in the Schedule to the Town and Country Planning (Tree Preservation)(England) Regulations 2012 1975([15](#)), as incorporated in any tree preservation order or as having effect by virtue of regulation 7 of those Regulations or Section 193 of the Planning Act 2008([16](#)) any direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works shall be treated as deeming permission to have been granted on application under regulation 17(1)(a) of those Regulations.

(4) The AstraZeneca conditions and University conditions have no effect within the Order limits.

(5) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the AstraZeneca permission (whether or not within the Order limits) from being carried out in accordance with any of the AstraZeneca conditions, then to that extent—

(a) there is deemed to be no breach of the AstraZeneca conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the AstraZeneca permission.

(6) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the University permission (whether or not within the Order limits) from being carried out in accordance with any of the University conditions, then to that extent—

(a) there is deemed to be no breach of University conditions concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the University permission.

(7) To the extent that the carrying out of any development in accordance with a direction under section 90(2A) of the 1990 Act deeming planning permission to be granted in relation to the authorised works prevents any development permitted by the Countryside permission (within the Order limits) from being carried out in accordance with the Countryside condition, then to that extent

(a) there is deemed to be no breach of Countryside condition concerned, and

(b) no enforcement action may be taken in respect of the development carried out under the Countryside permission.

(8) In this article—

“the AstraZeneca conditions” mean conditions 42 and 45 of the AstraZeneca permission;

“the AstraZeneca permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5

March 2015 and given reference number 14/2094/S73, with reserved matters approved by Cambridge City Council under the reference numbers 14/1633/REM, 19/1070/REM and 20/05027/REM and any further permission under section 73 of the 1990 Act or any non-material amendment to any of those permissions and approvals;

“the University conditions” means mean conditions 42 to 47 of the University permission; and

“the University permission” means the outline planning permission granted by Cambridge City Council on 15 October 2009 and given reference number 06/0796/OUT as amended by the outline planning permission granted by Cambridge City Council on 5 March 2015 and given reference number 14/2094/S73, together with reserved matters approved by Cambridge City Council under reference number 16/0653/REM and any further permission under section 73 of the 1990 Act or any non-material amendments approved in relation to any of the aforementioned permissions and approvals.

"the Countryside permission" means the outline planning permission granted by Cambridge City Council on 6 August 2010 and given reference 07/620 OUT with reserved matters 15/1829/REM and any further S73 permission under section 73 of the 1990 Act or any non-material amendment to those permissions and approvals;

"the Countryside condition" means condition 11 of the Countryside Permission

Michele Vas

Counsel

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[\[1\]](#)) Section 90(2A) was inserted by section 16(1) of the Transport and Works Act 1992 (c. 42).
[\[2\]](#)) S.I. 1969/17
[\[3\]](#)) S.I. 1975/148
[\[4\]](#)) S.I. 1999/1892
[\[5\]](#)) S.I. 2012/605
[\[6\]](#)) 2008. c.29
[\[1\]](#)) Section 90(2A) was inserted by section 16(1) of the Transport and Works Act 1992 (c. 42).
[\[2\]](#)) S.I. 1969/17
[\[3\]](#)) S.I. 1975/148
[\[4\]](#)) S.I. 1999/1892
[\[5\]](#)) S.I. 2012/605
[\[6\]](#)) 2008. c.29

Appendix 4

CAMBRIDGE CITY COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

OUTLINE PLANNING PERMISSION

SUBJECT TO CONDITIONS

Ref: 14/1691/S73



Mr Adam Halford
Bidwells
Bidwell House
Trumpington Road
Cambridge
Cambridgeshire
CB2 9LD

The Council hereby grant outline planning permission for

Section 73 to vary condition 63 of planning approval 06/0796/OUT for: Up to 215,000sqm floorspace (excluding plant areas) comprising 60,000sqm of clinical research and treatment (D1 and/or clinical in-patient treatment), 115,000sqm of biomedical and biotech research and development (B1(b)), 15,000sqm of biomedical and biotech research and development (B1(b)) or clinical research and treatment (D1 and/or clinical in-patient treatment), and 25,000sqm of either clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses, and including related support activities within use classes A1, A3, B1, D1 (creches/nurseries) or sui generis uses, with no individual premises used for support activities to exceed 500sqm; new areas of public realm; landscaping; parking areas; highway works; drainage works and all other associated infrastructure.

at

Land To The West And South West Of Addenbrookes Campus Robinson Way Cambridge Cambridgeshire

in accordance with your application received 24th October 2014 and the plans, drawings and documents which form part of the application, subject to the conditions set out below:

Start Date

1. Application for approval of the reserved matters shall be made to the Local Planning Authority before 15 October 2021.

Reason: In accordance with the requirements of section 51 of the Planning and Compulsory Purchase Act 2004.

Time period for Development of Reserved Matters Approvals

2. The development hereby permitted shall be begun before the expiration of two years from the date of approval of the last of the reserved matters to be approved.

Reason: In accordance with the requirements of section 51 of the Planning and Compulsory Purchase Act 2004.

Reserved Matters Approval for Development Phases

3. No development on any phase shall commence until approval of the details of the access, appearance, landscaping, layout and scale within that phase (hereinafter called the reserved matters) has been obtained from the Local Planning Authority in writing.

Reason: To ensure that all necessary details are acceptable (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/7, 3/11, 3/12, 4/2, 4/3, 4/4, 9/3, 9/5).

Environmental Statement

4. The development shall be carried out in accordance with the mitigation measures set out in the Environmental Statement of October 2006, Volumes 1, 2 and 3, including Vol. 3 addendum dated June 2007 unless provided for in any other conditions attached to this planning permission.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement (Cambridge Local Plan 2006 policies 9/3, 9/5 and 10/1).

Planning Parameters: Piazza and Circus

5. Unless otherwise agreed in writing by the Local Planning Authority, the following parameters for the proposed Piazza and Circus shall be provided:
 - a) a minimum of 46.5m width and a minimum of 6,000sqm in area for the Piazza.
 - b) a minimum of 104m in diameter and a minimum of 7,000 sqm in area for the Circus.
 - c) a maximum 1000sqm in gross floor area for buildings within the Circus.

Reason: To ensure that sufficient space is afforded to the Circus and Piazza areas to enable them to function as a strategic area of public realm within the Addenbrooke's Site and to ensure the proposal accords with approved plan PP2 (Cambridge Local Plan 2006 policies 3/4, 3/7, 3/11 and 9/5).

Planning Parameters: Parameter Plans

6. Unless otherwise agreed in writing by the Local Planning Authority, the development shall be substantially in accordance with the following parameters:
- a) Maximum building heights above ground level (including roof level plant but excluding flues) shall not exceed those specified on approved plan PP2.
 - b) Maximum building envelopes shall not exceed those specified on approved plan PP2.
 - c) Building lengths and widths shall accord with the maximum and minimum parameters as specified in the text to approved plan PP3.
 - d) Building heights above ground level shall be no lower than those specified on approved plan PP4.
 - e) Flue heights shall not exceed 8m as shown on approved plan PP3.
 - f) Building facades facing south onto the southern spine road shall occupy no more than 60% of their plot width, as measured from and along the southern spine road, within 12m of the boundary with the southern spine road.
 - g) West facing building facades within the allocated biomedical and biotech research and development area, shall occupy no more than 60% of their plot width, as measured from and along the 35m building line, within 9m of the boundary with the 35m building line.
 - h) Building facades which face the Boulevard (except those facades facing east onto the Boulevard north of the Cambridgeshire Guided Busway route), shall occupy between 20% and 70% of their plot width, as measured from and along the boundary with the Boulevard, within 6m of the permitted maximum building envelope extent adjacent to the Boulevard.
 - i) Building facades which face the Circus or Piazza shall exceed 60% of their plot width within 6m of the permitted maximum building envelope extent where facing the Circus or Piazza.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside and to ensure subsequent development responds positively to key areas of public realm (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Planning Parameters: Strategic Gaps

7. A minimum of two gaps of at least 25m in width shall be provided within the biomedical and biotech research and development area shown on parameter plan 1 south of the Cambridgeshire Guided Busway route between buildings. The gaps shall run from the western boundary adjacent to the railway to the eastern boundary adjacent to the Boulevard and shall not be occupied by any buildings. Unless otherwise agreed in writing by the Local Planning Authority, the precise location of the first gap shall be submitted to and approved in writing by the Local Planning Authority concurrently with the first submission of reserved matters for buildings within the allocated biomedical and biotech research and development area south of the Cambridgeshire Guided Busway route and the precise location of the second gap shall be submitted to and approved in writing by the Local Planning Authority concurrently with the second submission of reserved matters for buildings within the allocated biomedical and biotech research and development area south of the Cambridgeshire Guided Busway route.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside and to ensure subsequent development responds positively to key areas of public realm (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Planning Parameters: Land Use

8. Unless otherwise agreed in writing by the Local Planning Authority, land uses shall substantially accord with the land use locations as specified on approved plan PP1.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the approved plans and Environmental Statement (Cambridgeshire and Peterborough Structure Plan 2003 policies 6/1 and 9/8 and Cambridge Local Plan 2006 policies 9/3, 9/5 and 10/1).

Planning Parameters: Allocation of Floorspace

9. Unless otherwise agreed in writing by the Local Planning Authority, the development shall not exceed 215,000sqm of gross external floor space (excluding areas for plant and car parking structures. Areas for plant would include areas for plant within passive void areas between useable floor levels) and shall not exceed gross external floor space limits for the following uses:
 - a) 115,000sqm of biomedical and biotech research and development (B1(b)).
 - b) 60,000sqm for clinical research and treatment (D1 and/or clinical in-patient treatment).

- c) 25,000sqm of either clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses.
- d) 15,000sqm of biomedical and biotech research and development (B1(b)) or clinical research and treatment (D1 and/or clinical in-patient treatment).

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the description of development and Environmental Statement and to provide flexibility within the allocated floor space tolerances should Papworth Hospital decide to no longer relocate to the site and given the unknown floorspace size of Papworth Hospital (Cambridge Local Plan 2006 policy 9/5).

Planning Parameters: Ancillary Uses

- 10. Unless otherwise agreed in writing by the Local Planning Authority, ancillary uses for individual occupiers within use classes A1, A3, B1, D1 (crèches/nurseries) or sui generis ancillary uses shall not individually exceed 500sqm gross floor space.

Reason: To ensure the balance of uses is appropriate to the site (Cambridge Local Plan 2006 policy 9/5).

Permitted Development Restriction

- 11. Notwithstanding the provisions of Schedule 2, Part 2, Class A of the Town and Country Planning (General Permitted Development) Order 1995 (or any Order revoking and re-enacting that order with or without modification) the erection, construction, maintenance, improvement or alteration of a gate, fence, wall or other means of enclosure shall not be allowed without the granting of planning permission or reserved matters approval.

Reason: In order to safeguard the character and appearance of the development of the site (Cambridge Local Plan 2006 policies 3/4, 3/7 and 3/12).

Materials

- 12. No development of a building shall take place until sample panels of the materials to be used in the construction of its external surfaces has been submitted to and approved in writing by the Local Planning Authority. The panels shall show the proposed combination of external materials to be used. The development shall be constructed in accordance with the approved samples.

Reason: To ensure that the appearance of the external surfaces is appropriate (Cambridge Local Plan 2006 policies 3/4, 3/7 and 3/12).

Levels

13. No development of a building shall take place until full details of the proposed levels of the building, associated structures and associated building plot, compared to existing levels of the site, have been submitted to and approved in writing by the Local Planning Authority. The approved development shall be constructed in accordance with the approved levels details unless otherwise agreed in writing by the Local Planning Authority.

Reason: In order to safeguard the character and appearance of the area (Cambridge Local Plan 2006 policies 3/4, 3/7 and 3/12).

Amenity Space Strategy

14. Concurrent with the submission of any reserved matters application for any clinical development, an Informal Amenity Space Strategy shall be submitted to and approved in writing by the Local Planning Authority. The Strategy shall examine the requirement for informal landscaped open space within the associated clinical building plot to meet the needs of visitors, patients and employees of the proposed clinical development. The size, location and timing of provision for any such space shall accompany the Strategy. The amenity space shall be provided in accordance with the approved Strategy and shall be capable of use no later than the occupation of the associated clinical development.

Reason: To ensure the needs of visitors, patients and employees associated with the clinical development of the site are adequately addressed (Cambridge Local Plan 2006 policies 3/7, 3/11, 9/3).

Ecology: Site Wide Nature Conservation Management Plan

15. The development shall be carried out in accordance with the Site Wide Nature Conservation Management Plan dated September 2010.

Reason: To ensure that the development of the site conserves and enhances ecology (Cambridge Local Plan 2006 policies 4/3, 4/6 and 4/8).

Ecology: Reserved Matters Applications

16. Any reserved matters application shall demonstrate how it accords with the aims and objectives of the Nature Conservation Management Plan and shall detail which specific ecological measures are proposed and the timing for their delivery. The ecological measures shall be carried out in accordance with the approved details and timing of delivery.

Reason: To ensure that the development of the site conserves and enhances ecology (Cambridge Local Plan 2006 policies 4/3, 4/6 and 4/8).

Strategic Site Surface Water

17. The development shall be carried out in accordance with the Cambridge Biomedical Campus Extension Surface Water Strategy Report dated 20 October 2011.

Reason: In order to safeguard against the risk of flooding, to ensure adequate flood control, maintenance and efficient use and management of water within the site, to ensure the quality of the water entering receiving water courses is appropriate and monitored and to promote the use of sustainable urban drainage systems to limit the volume and rate of water leaving the site (Cambridge Local Plan policy 3/1).

Individual Site Surface Water

18. Any reserved matters application shall include a detailed surface water strategy pursuant to the reserved matters site for which approval is sought. The strategy shall demonstrate how the management of water within the reserved matters application site for which approval is sought accords with the approved details of the strategic site wide surface water strategy. The strategy shall be based upon a SUDS hierarchy, as espoused by DTI publication 'Sustainable Drainage Systems CIRIA C609' and this Council's adopted supplementary planning document 'Sustainable Design and Construction' (2007). The strategy shall maximise the use of measures to control water at source as far as practicable to limit the rate and quantity of run-off and improve the quality of any run-off before it leaves the site or joins any water body.

If source control infiltration SUDS methods are demonstrated to be impracticable or only partly feasible, the strategy shall promote other measures such as swales, surface water retention ponds, wetlands or other surface water retention measures to promote infiltration and mimic as far as possible existing natural greenfield run-off patterns (rates and volumes).

The strategy shall include details of all flow control systems and the design, location and capacity of all such SUDS features and shall include ownership, long-term adoption, management and maintenance scheme(s) and monitoring arrangements/responsibilities, including detailed calculations to demonstrate the capacity of receiving on-site strategic water retention features without the risk of flooding to land or buildings. The development shall be carried out in accordance with the approved details and no building pursuant to the particular reserved matters for which approval is being sought shall be occupied or used until such time as the approved detailed surface water measures have been fully completed in accordance with the approved details.

Reason: In order to safeguard against the increased risk of flooding, to ensure adequate flood control, maintenance and efficient use and management of water within the site, to ensure the quality of the water entering receiving water courses is appropriate and monitored and to promote the use of sustainable urban drainage systems to limit the volume and rate of water leaving the site (Cambridge Local Plan policy 3/1).

Ground Water

19. The development shall be carried out in accordance with the Groundwater Assessment Report Cambridge Biomedical Campus September 2011.

Reason: To safeguard the ground water spring flow of Nine Wells Local Nature Reserve (Cambridge Local Plan 2006 policy 4/6).

Surface Water Modelling: Hobson's Brook/Conduit and Vicar's Brook

20. The development shall be carried out in accordance with the Cambridge Biomedical Campus Hydraulic Modelling Report dated August 2010.

Reason: To ensure that proposed drainage for the 2020 site, combined with proposed drainage for Clay Farm, Bell School and Glebe Farm sites, do not result in any increased flooding within Hobson's Brook/Conduit and Vicar's Brook systems and that suitable mitigation is carried out if required (Cambridge Local Plan 2006 policy 3/1).

Foul Water

21. The development shall be carried out in accordance with plans: 53337/K/02 Proposed Foul Drainage Layout, 60196686/SK-03 Proposed route of plumbing main, 60196686/SK-04, 53337/K/22 Infrastructure and external services details sheet 2 (foul water), 53337/K/27 Infrastructure and external services details foul water pumping station, AO/12576 Issue C sheet 1 General Arrangement of pumps, 53337/K/30 Rev22 pump station compound details.

Reason: To prevent the increased risk of pollution to the water environment and to prevent an increased risk of flooding to existing property (Cambridge Local Plan 2006 policy 8/18).

Construction Environmental Management Plan

22. The development shall be carried out in accordance with the Cambridge Biomedical Campus Extension Side Wide Construction Environmental Management Plan October 2011.

Reason: To ensure the environmental impact of the construction of the development is adequately mitigated and in the interests of the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Construction Method Statement

23. Prior to the commencement of development of any approved reserved matters phase, a Construction Method Statement (CMS) shall be submitted to and approved in writing by the Local Planning Authority for that phase. The CMS shall demonstrate how the construction of the reserved matters approval accords with the details of construction criteria A-U (except criteria E) of the Construction Environmental Management Plan (CEMP). In addition to criteria A-U, the CMS shall also provide a specific construction programme and a plan identifying: the contractor site storage area/compound; screening and hoarding locations; access arrangements for vehicles, plant and personnel; building material, plant and equipment storage areas; contractor parking arrangements for construction and personnel vehicles; and the location of contractor offices.

Thereafter the development shall be undertaken in accordance with the agreed details unless the Local Planning Authority agrees in writing to the variation of any detail in advance of it being undertaken.

Reason: To ensure the environmental impact of the construction of the development is adequately mitigated and in the interests of the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Detailed Waste Management Plan for Construction

24. Prior to the commencement of development of any approved reserved matters phase, a Detailed Waste Management Plan (DWMP) shall be submitted to and approved in writing by the Local Planning Authority for that phase. The DWMP shall demonstrate how the construction of the reserved matters approval will accord with the details of the principles of the Outline Waste Management Plan. The DWMP shall include details of:

- a) the anticipated nature and volumes of waste.
- b) measures to ensure the maximisation of the reuse of waste.
- c) measures to ensure effective segregation of waste at source including waste sorting, storage, recovery and recycling facilities to ensure the maximisation of waste materials both for use within and outside the site.
- d) any other steps to ensure the minimisation of waste during construction.
- e) the location of facilities pursuant to criteria b/c/d.
- f) proposed monitoring and timing of submission of monitoring reports.
- g) the proposed timing of submission of a Waste Management Closure Report to demonstrate the effective implementation, management and monitoring of construction waste during the construction lifetime of the development.

Unless otherwise agreed in writing, thereafter the implementation, management and monitoring of construction waste shall be undertaken in accordance with the agreed details and no individual building subject to a Detailed Waste Management Plan shall be occupied until the Waste Management Closure Report has been submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure the sustainable management of construction waste (Cambridge Local Plan policy 3/1 and Cambridge City Council Sustainable Design and Construction SPD 2007).

Foundations

25. In the event that the foundations of any building require piling, prior to any piling taking place in association with that building, a method statement shall be submitted to and approved in writing by the Local Planning Authority detailing the type of piling to be used, potential noise and vibration levels at the nearest noise sensitive locations in accordance with British Standard 5228 - Part 4 and mitigation measures to be undertaken in order to safeguard the amenity of adjacent residents/occupiers. The piling mitigation shall be carried out in accordance with the approved details.

Reason: To protect the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Construction Times

26. Unless otherwise agreed in writing by the Local Planning Authority pursuant to criteria C of the Construction Environmental Management Plan, no construction work shall be carried out or plant operated other than between the following hours: 0730 to 1800 Monday to Friday, 0800 to 1300 on Saturdays and at no time on Sundays, Bank or Public Holidays.

Reason: To protect the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Collection and Delivery Times

27. Unless otherwise agreed in writing by the Local Planning Authority pursuant to criteria D of the Construction Environmental Management Plan, there shall be no collection or deliveries to the site for the purposes of construction outside the hours of 0730 to 1800 Monday to Friday, 0800 to 1300 on Saturdays and at no time on Sundays, Bank or Public Holidays.

Reason: To protect the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Lighting: West Facing Facades

28. Unless otherwise agreed in writing by the Local Planning Authority, except for building access points, no west facing external facades of buildings adjacent to the railway line and no south facing external facades of buildings adjacent to the southern spine road shall be directly lit by external up-lighters or down-lighters.

Reason: To safeguard the character and setting of the Green Corridor and surrounding open countryside and to encourage the continued foraging of bats (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/11, 3/12, 4/2, 4/3, 9/3 and 9/5).

Lighting: Individual Development Plots

29. Prior to the erection or installation of any outdoor lighting associated with the development of an individual building plot, a detailed outdoor lighting scheme applicable to that plot and associated building/s shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall specify the method of lighting (including details of the type of lights, orientation/angle of the luminaries, the spacing and height of lighting columns/fixings), the extent/levels of illumination over the site and on adjacent land and measures to be taken to contain light within the curtilage of the site. The scheme shall be implemented in accordance with approved details and shall thereafter be maintained as such.

Reason: In the interests of visual amenity and to ensure that the development will not result in unacceptable light pollution (Cambridge Local Plan 2006 policies 3/11, 4/13 and 4/15).

Extraction Equipment

30. No occupation of a building shall take place until details of equipment for the purpose of extraction and/or filtration of fumes, odours and/or hazardous material such as airborne bacterial and viral organisms from the building have been submitted to and approved in writing by the Local Planning Authority. The approved extraction/filtration scheme shall be fully installed before the use hereby permitted is commenced.

Reason: To protect the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Insulation

31. No occupation of a building shall take place until a scheme for the insulation of the building(s) and/or plant in order to minimise the level of noise emanating from the building(s) and/or plant has been submitted to and approved in writing by the Local Planning Authority. The insulation scheme shall be fully implemented before the use hereby permitted is commenced.

Reason: To protect the amenity of nearby residents/occupiers (Cambridge Local Plan 2006 policy 4/13).

Waste

32. No development of a building shall take place until full details of on-site storage facilities for that building for trade waste, including waste for recycling, have been submitted to and approved in writing by the Local Planning Authority. Such details shall identify the specific positions of where wheelie bins, paladins or any other means of storage will be stationed and the arrangements for the disposal of waste. The approved facilities shall be provided prior to the commencement of the use hereby permitted and shall be retained thereafter unless alternative arrangements are agreed in writing by the Local Planning Authority.

Reason: To protect the amenities of nearby residents/occupiers, to safeguard visual amenity and to ensure adequate waste storage and recycling provision (Cambridge Local Plan 2006 policies 3/12 and 4/13).

Contaminated Land: Assessment and Remedial Strategy

33. Notwithstanding the submitted contamination report as part of the Environmental Statement, no development of an approved reserved matters phase shall take place until a contaminated land assessment and associated remedial strategy, together with a timetable of works for that phase, have been submitted to and agreed in writing by the Local Planning Authority. The contaminated land assessment and associated remedial strategy shall adhere to the following points.
- a) The site investigation strategy shall be carried out in accordance with the approved Geo-environmental Remediation and Mitigation Strategy (September 2011).
 - b) The site investigation, including relevant soil, soil gas, surface and groundwater sampling, shall be carried out by a suitably qualified and accredited consultant/contractor in accordance with a quality assured sampling and analysis methodology.
 - c) A site investigation report detailing all investigative works and sampling on site, together with the results of the analysis, risk assessment to any receptors and a proposed remediation strategy shall be submitted to the Local Planning Authority. The Local Planning Authority shall approve such remedial works as required prior to any remediation commencing on site. The works shall be of such a nature as to render harmless the identified contamination given the proposed end use of the site and surrounding environment including any controlled waters.
 - d) Approved remediation works shall be carried out in full on site under a quality assurance scheme to demonstrate compliance with the proposed methodology and best practice guidance.
 - e) If, during the works, contamination is encountered which has not previously been identified then the additional contamination shall be fully assessed and an appropriate remediation scheme agreed with the Local Planning Authority.

- f) Upon completion of the works, this condition shall not be discharged until a closure report has been submitted to and approved by the Local Planning Authority. The closure report shall include details of the proposed remediation works and quality assurance certificates to show that the works have been carried out fully in accordance with the approved methodology. Details of any post-remedial sampling and analysis to show the site has reached the required clean-up criteria shall be included in the closure report together with the necessary documentation detailing what waste materials have been removed from site.

Reason: In order to ensure that any contamination of the site is identified and remediation measures are appropriately undertaken to secure full mitigation (Cambridge Local Plan 2006 policy 4/13).

Contaminated land: Gas Risk

34. Should the contaminated land assessment and associated remedial strategy identify the presence of material with potential to generate an identifiable ground gas risk for a building, prior to the commencement of development of that building, a specification for gas protection to be incorporated into the building design to prevent build up of potentially asphyxiating gases shall be submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason: In order to safeguard the health and safety of future occupants of buildings (Cambridge Local Plan 2006, policy 4/13).

Renewable Energy: 10% Requirement

35. No development of a building shall take place until a renewable energy statement for that particular building, which demonstrates that at least 10% of the building's total predicted energy requirements will be from on-site renewable energy sources, has been submitted to and approved in writing by the Local Planning Authority. The statement shall include the total predicted energy requirements for that building in the form of an Energy Statement of the building and shall set out a schedule of proposed on-site renewable energy technologies, their respective energy contributions, location, design and a maintenance programme. The approved renewable energy technologies shall be fully installed and operational prior to the occupation of the approved building and shall thereafter be maintained and remain fully operational in accordance with the approved maintenance programme, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of reducing carbon dioxide emissions (Cambridge Local Plan 2006 policy 8/16 and Supplementary Planning Document 'Sustainable Design & Construction' 2007).

Renewable Energy: LDF Percentage Flexibility

36. If any reserved matters application for the development of a building is submitted after three years from the date of outline planning permission and if a specific policy regarding renewable energy that stipulates a higher on-site renewable energy percentage requirement than 10% is formally adopted as part of the Local Development Framework prior to the making of any such reserved matters application and it is not demonstrated that to require full compliance would not be economically or technically viable, the specified higher on-site renewable energy percentage requirement specified by the new policy shall apply pursuant to condition 35. The Energy Statement, installation, operation and maintenance of the renewable energy technologies shall continue to apply pursuant to condition 35.

Reason: The period of consent for which outline planning permission is given is for a longer period than the standard 3-year permission. There is likelihood, given that Government policy on sustainable development and renewable energy is moving rapidly, that new policies will be adopted within the Local Development Framework that will require a higher renewable energy percentage requirement that, without this condition, could not be accounted for. The Local Planning Authority considers that this approach is consistent with the aims and objectives of PPS1 Delivering Sustainable Development (2005).

BREEAM and NEAT Building Standards

37. No development of a building shall take place until a pre-assessment BREEAM report or, in the case of an NHS building, a pre-assessment NEAT report, which is prepared by an approved BREEAM or NEAT assessor, indicating that the building is capable of achieving at least a 'very good' rating or above, has been submitted to and approved in writing by the Local Planning Authority. No later than 6 months after occupation of the building, a BREEAM or NEAT certificate shall be submitted to and approved in writing by the Local Planning Authority demonstrating that applicable building achieves at least a "very good" BREEAM or NEAT rating or above. In the event that such a rating is replaced by a comparable national measure of sustainability for building design, that measure shall be applicable to the proposed building unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2006 policy 8/16 and Supplementary Planning Document 'Sustainable Design & Construction' 2007).

Tree Protection Robinson Way: Assessment Surveys

38. No development within a building plot that is within 20m of Robinson Way shall take place until a land survey, tree survey and arboricultural implications assessment, which are applicable to the associated building plot, in accordance with BS:5837:2005, have been submitted to and approved in writing by the Local Planning Authority. The surveys shall include:

- a) The location of all trees, shrub masses and hedges.
- b) The location of streams, buildings and other structures, boundary features and services.
- c) Spot heights of ground level throughout the site.
- d) The location of trees on land adjacent to or which overhang the development site.
- e) A categorization of trees or groups of trees for their quality and value in accordance with table 1 of the British Standard.

Reason: In the interests of accurately establishing the quality and value of trees on or adjacent to the site and the implications for development (Cambridge Local Plan 2006 policies 4/3 and 4/4).

Tree Protection Robinson Way: Method Statements and Plan

39. No development within a building plot that is within 20m of Robinson Way shall take place until an arboricultural method statement, tree constraints plan and tree protection plan, which are applicable to the associated building plot, in accordance with BS:5837:2005, have been submitted to and approved in writing by the Local Planning Authority. These shall include:

- a) Plans showing trees to be removed, identified by number.
- b) Plans showing trees to be retained, identified by number, with canopies accurately plotted.
- c) A tree constraints plan that identifies root protection areas of retained trees.
- d) The precise location and design details for the erection of protective tree barriers and any other physical protection measures.
- e) A method statement in relation to construction operations in accordance with paragraph 7.2 of the British Standard.

Development shall be carried out in accordance with the approved details.

Reason: In the interests of visual amenity and safeguarding trees that are worthy of retention (Cambridge Local Plan 2006 policies 4/3 and 4/4).

Tree Protection Robinson Way: Protective Fencing

40. No development within a building plot that is within 20m of Robinson Way shall take place until fencing for the protection of any retained tree within the associated building plot has been fully erected in accordance with the approved plans and particulars. The fencing shall be retained intact for the full duration of the development until all equipment, materials and surplus materials have been removed from the site. Nothing shall be stored or placed in any fenced area in accordance with this condition and the ground levels within those areas shall not be altered, nor shall any excavations be made without the written consent of the Local Planning Authority.

Reason: In the interests of visual amenity and safeguarding trees that are worthy of retention (Cambridge Local Plan 2006 policies 4/3 and 4/4).

Tree Protection Robinson Way: Excavation Trenches

41. No development within a building plot that is within 20m of Robinson Way shall take place until full details of the position and proposed depth of excavation trenches for all services (including cables, pipes, surface water drains, foul water drains and public utilities) and their means of installation which pass underneath the canopy of any existing tree adjacent to Robinson Way, have been submitted to and approved in writing by the Local Planning Authority. Development shall be carried out in accordance with the approved details.

Reason: In the interests of visual amenity and safeguarding trees that are worthy of retention (Cambridge Local Plan 2006 policies 4/3 and 4/4).

Structural Landscaping: Site Wide Scheme

42. Structural Landscaping along the western edge of the allocated biotech and biomedical research and development area shown on parameter plan 1, south of the Cambridgeshire Guided Bus embankment shall be carried out in accordance with the following drawings:

Drawing No 1777/C42/001C: Landscape Proposals Western Boundary

Drawing No 1777/C42/003E: Tree Pit Details Longitudinal Section

Drawing No 1777/C42/004E: Tree Pit Details Cross Section

Western Boundary Landscape Specification Revision A

Unless, any alternative scheme(s) which provides a minimum 12-14m structural woodland landscaping scheme, with additional 3m x 4.8m deep tree blocks positioned at a maximum of 15m centres, in accordance with parameter plan 6 and plan 1700/SK180707.01B, along the western edge of the allocated biotech and biomedical research and development area shown on parameter plan 1, south of the Cambridgeshire Guided Bus embankment are approved through subsequent discharge of this condition by the local planning authority. Development shall then be carried out in accordance with the approved details.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside. Details for part (a) of the structural landscaping have already been agreed. (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Structural Landscaping: Implementation and Replacement

43. All planting, seeding or turfing comprised in the approved structural landscaping scheme shall be fully carried out in the first planting and seeding seasons following the commencement of development of any building, or in accordance with a landscaping phasing plan that is submitted to and approved in writing by the Local Planning Authority. Any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others of similar size and species as those originally planted, unless the Local Planning Authority gives written consent to any variation.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Structural Landscaping: Management Plan

44. The Management of the Structural Landscaping approved through condition 42 shall be carried out in accordance with the Cambridge Biomedical Campus Western Boundary Landscape Management Specification Revision A dated 04 November 2011.

If any alternative structural landscaping scheme is agreed through condition 42, then a replacement landscape management plan for the approved structural landscaping scheme including long-term design objectives, management responsibilities and management and maintenance schedules for all landscape areas for a minimum period of 25 years, shall be submitted to and approved by the Local Planning Authority prior to the commencement of any planting. The landscape management plan shall be carried out as approved.

Reason: To ensure satisfactory arrangements are in place to ensure the proper management and maintenance of landscaped areas (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Landscaping: Development Plot Schemes

45. Unless otherwise agreed in writing by the Local Planning Authority, any reserved matters application for the erection of a building shall include an accompanying landscaping scheme for the associated plot. The landscaping scheme shall include full details of planting plans and written specifications, including cultivation proposals for maintenance and management associated with plant and grass establishment, details of the mix, size, distribution, density and levels of all trees/hedges/shrubs to be planted and the proposed time of planting. No development within the site for which reserved matters approval is sought shall commence until the landscaping scheme has been approved in writing by the Local Planning Authority. The scheme shall be carried out in accordance with the approved details unless otherwise agreed in writing by the Local Planning Authority.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Landscaping: Development Plot Implementation and Replacement

46. All planting, seeding or turfing comprised in the approved landscaping schemes for the individual plots shall be fully carried out in the first planting and seeding seasons following the commencement of development, or in accordance with a landscaping phasing plan that is submitted to and approved in writing by the Local Planning Authority. Any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others of similar size and species as those originally planted, unless the Local Planning Authority gives written consent to any variation. The landscaping shall be fully completed in accordance with the approved scheme and/or phasing plan within the respective development plot.

Reason: In order to mitigate the visual impact of the proposed development on the setting and special character of Cambridge, the retained Green Belt, the Green Corridor and surrounding open countryside (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Landscaping: Development Plot Management

47. A landscape management plan for any building plot including long-term design objectives, management responsibilities and management and maintenance schedules for all landscape areas for a minimum period of 25 years, shall be submitted to and approved by the Local Planning Authority prior to the occupation of any part of the buildings for which reserved matters approval is being sought. The landscape management plan shall be carried out as approved.

Reason: To ensure satisfactory arrangements are in place to ensure the proper management and maintenance of landscaped areas (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/6, 3/7, 3/11, 3/12, 4/2, 4/3, 9/3, and 9/5).

Earthworks

48. Prior to the commencement of development of any approved reserved matters phase, details of earthworks associated with that phase shall be submitted to and approved in writing by the Local Planning Authority. These details shall include the proposed grading and mounding of land areas including the levels and contours to be formed, showing the relationship of proposed grading and mounding to existing vegetation and surrounding landform including timing. Development shall be carried out in accordance with the approved details.

Reason: In the interests of visual amenity and to ensure that any earthworks are appropriate to the site context and surrounding landscape (Cambridge Local Plan 2006 policies 3/4, 3/11 and 3/12).

Hard Landscaping

49. Unless otherwise agreed in writing by the Local Planning Authority, no development of a building shall take place until full details of hard landscape works associated with its plot have been submitted to and approved in writing by the Local Planning Authority and these works shall be carried out as approved prior to the occupation of any part of the building hereby approved. These details shall include: proposed finished levels or contours; means of enclosure; car parking layouts; other vehicle and pedestrian access and circulation areas; hard surfacing materials; minor artefacts and structures; furniture; refuse or other storage units; signs; any proposed public art.

Reason: In the interests of visual amenity and to ensure that suitable hard landscape is provided as part of the development (Cambridge Local Plan 2006 policies 3/4, 3/11 and 3/12).

Transport: The Boulevard

50. Any reserved matters application for the development of the proposed Boulevard shall include a detailed engineering scheme/plan showing all footway/footpath/cycleway links comprising dimensions, levels, forms of construction, kerbing, surface water drainage, street lighting systems and traffic calming measures, together with a phasing plan that is linked to the occupation of buildings on the site. The scheme/plan shall substantially accord with approved parameter plans PP7, PP8, PP9 and PP10 and shall include:

- a) Intersections with the Addenbrooke's Access Road and Cambridgeshire Guided Bus (including details of a signalised crossing).

- b) Proposed intersections and alterations to all existing roads, footpaths and cycleways (including Robinson Way).
- c) Details of the proposed location of all bus stops together with details of proposed alterations to existing bus stops within Addenbrooke's.
- d) Details of the proposed upgrading of public footpath no.47 (or an equivalent route) within the site.
- e) Details of all proposed cycle routes, both dedicated and on-road.
- f) Details of all proposed materials and finishes.
- g) Detailed design of all proposed street furniture (including all signs, lighting, bollards, bus stops/shelters, cycle parking).
- h) a planting scheme for attenuation ponds.
- i) a single avenue of large tree planting (including specification) either side of the Boulevard.
- j) Details of management and maintenance responsibilities for all planting.

The development shall be carried out in accordance with the approved details.

Reason: In order to safeguard highway safety and to secure an appropriate means of access for users of the development (Cambridge Local Plan 2006 policies 3/7, 8/2 and 8/11).

Transport: Southern Spine Road

51. Any reserved matters application for the development of the proposed Southern Spine Road shall include a detailed engineering scheme/plan showing all footway/footpath/cycleway links comprising dimensions, levels, forms of construction, kerbing, surface water drainage, street lighting systems and traffic calming measures, together with a phasing plan that is linked to the occupation of buildings on the site. The scheme/plan shall substantially accord with approved parameter plans PP7, PP8, PP9 and PP10 and shall include:
 - a. Intersections with the Addenbrooke's Access Road.
 - b. Proposed intersections and alterations to all existing roads, footpaths and cycleways (including Robinson Way).
 - c. Details of the proposed location of all bus stops together with details of proposed alterations to existing bus stops within Addenbrooke's campus.
 - d. Details of all proposed cycle routes, both dedicated and on-road.
 - e. Details of all proposed materials and finishes.
 - f. Detailed design of all proposed street furniture (including all signs, lighting, bollards, bus stops/shelters, cycle parking).
 - g. a half avenue of large tree and hedge planting on the northern side of the Southern Spine Road.
 - h. Details of management and maintenance responsibilities for all planting.

The development shall be carried out in accordance with the approved details.

Reason: In order to safeguard highway safety and to secure an appropriate means of access for users of the development (Cambridge Local Plan 2006 policies 3/7, 8/2 and 8/11).

Car Parking: On-Plot research and Development

52. On-plot car parking provision for any biotech or biomedical research and development use shall be provided at a ratio of 1 space for every 72 square metres of gross floor area measured externally or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of on-plot car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridgeshire and Peterborough Structure Plan 2003 policies 6/1 and 9/8 and Cambridge Local Plan 2006 policies 8/10 9/3, 9/5 and 10/1).

Car Parking: Clinical, Higher Education or Sui Generis (Employee)

53. Car parking provision for employees of any clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses shall be provided at a ratio of 1 space for every 72 square metres of gross floor area measured externally or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridgeshire and Peterborough Structure Plan 2003 policies 6/1 and 9/8 and Cambridge Local Plan 2006 policies 8/10 9/3, 9/5 and 10/1).

Car Parking: Clinical, Higher Education or Sui Generis (Patients and Visitors)

54. Car parking provision for patients and visitors for any clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses shall be provided at a ratio of 1 space for every 773 square metres of gross floor area measured externally or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridge Local Plan 2006 policies 8/10 9/3, 9/5 and 10/1).

Car Parking: Disabled Spaces

55. Unless otherwise agreed in writing by the Local Planning Authority, disabled car parking spaces shall constitute at least 5% of the total number of spaces provided.

Reason: To ensure that the development provides sufficient disabled parking (Cambridge Local Plan 2006 policy 8/10).

Car Parking: Existing Modal Share

56. The submission of any reserved matters application for approval of any building shall include a summary from the Addenbrooke's Annual Travel Survey showing the current modal share for staff, patients and visitors cycling to Addenbrooke's.

Reason: To enable an accurate estimation of the modal share of people cycling to Addenbrooke's Campus (Cambridge Local Plan 2006 policy 8/6).

Car Parking: Trip Estimation

57. The submission of any reserved matters application for approval of any building shall include an estimation of the total number of staff, patients and visitors that will visit the building in a typical day.

Reason: To ensure that the proposed level of cycling provision is appropriate to the nature of the proposed building and its use (Cambridge Local Plan 2006 policy 8/6).

Car Parking: Calculation of Spaces Required

58. Unless otherwise agreed in writing by the Local Planning Authority, the submission of any reserved matters application for approval of any building shall include a quantum of cycle parking provision that is equivalent to:

a) For staff provision, a level which will provide a total number of spaces which cater for at least 10% more than the existing modal share percentage of staff cycling to work as shown by the latest Addenbrooke's Annual Travel Survey. The final level of provision to be calculated shall assume that only 80% of staff will be on-site at any one time.

b) For patients and visitors, a level which will provide a total number of spaces which cater for at least 10% more than the existing modal share percentage of patients and visitors cycling to work as shown by the latest Addenbrooke's Annual Travel Survey. The final level of provision to be calculated shall assume that cycle parking spaces are used 3 times daily.

Reason: To ensure that the proposed level of cycling provision is appropriate to the nature of the proposed building and its use (Cambridge Local Plan 2006 policy 8/6).

Cycle Parking: Details of Facilities

59. No development of a building shall commence until details of facilities for the covered, secure parking of bicycles relevant to that building have been submitted to and approved in writing by the Local Planning Authority. The facilities shall be provided in accordance with the approved details prior to the occupation of the building for which permission is sought and shall thereafter be retained and shall not be used for any other purpose unless otherwise agreed in writing by the Local Planning Authority.

Reason: To ensure appropriate provision for the secure storage of bicycles (Cambridge Local Plan 2006 policy 8/6).

Archaeological

60. Notwithstanding the submitted archaeological mitigation strategy, no development of a building or material operation constituting development relating to any roadway/footpath or area of public realm shall take place until the implementation of a programme of archaeological work, in accordance with a written scheme of investigation relating to that building or material operation constituting development relating to any roadway/footpath or area of public realm, has been submitted by the applicant, approved in writing by the Local Planning Authority and carried out in accordance with the approved details.

This written scheme will include the following components, completion of each of which will trigger the phased discharging of the condition:

- a) fieldwork in accordance with the agreed written scheme of investigation.
- b) post-excavation assessment (to be submitted within six months of the completion of fieldwork, unless otherwise agreed in writing in advance with the Local Planning Authority).
- c) completion of post-excavation analysis, preparation of site archive ready for deposition at a store approved by the Local Planning Authority, completion of an archive report, and submission of a publication report (to be completed within two years of the completion of fieldwork, unless otherwise agreed in advance in writing with the Local Planning Authority).

Reason: To ensure that an appropriate archaeological investigation of the site has been implemented before development commences (Cambridge Local Plan 2006 policy 4/9).

Shop Front Design Guide

61. Prior to the occupation of any A1 or A3 use, a tenants' shopfront design guide shall be submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be undertaken in accordance with the agreed signage protocol unless otherwise agreed in writing by the Local Planning Authority.

Reason: To ensure that the details of development respect the character and appearance of the public realm (Cambridge Local Plan 2006 policy 3/15).

Public Realm Design Strategy

62. Unless otherwise agreed in writing by the Local Planning Authority, any reserved matters application in respect of the development of the proposed Circus and Piazza, shall include a comprehensive Public Realm Design Strategy applicable to the entirety of the proposed Circus and Piazza areas. The Strategy shall set out a vision for the proposed Circus and Piazza areas and shall include detailed information and accompanying plans of the following items:

Movement Strategy

A Movement Strategy that includes:

- a) Detailed guidance on the provision of measures to promote the use of the Circus and Piazza as a space that is principally for use for pedestrians, cyclists and the Cambridgeshire Guided Bus and which limits the ability of any other vehicles to utilise the Circus and Piazza for primary access and/or service delivery requirements.
- b) A plan with cross-sections showing proposed roads, bus lanes, footpaths and cycleways (widths and specifications).
- c) Detailed design and location of speed restraint measures.

Car Parking

- a) The location of car parking spaces and measures to control their use.
- b) The location of drop-off spaces.

Drainage

A Sustainable Drainage Scheme that includes:

a) Design standards and methodology for the implementation of a sustainable urban drainage system (using a SUD's hierarchy), including the detailed design of specific features and their maintenance/management requirements and how the system relates to the strategic management of water within the site.

Soft Landscaping

A Soft Landscaping Scheme that includes:

- a) Planting plans and written specifications/details of the species, mix, size, distribution and density of all trees/hedges/shrubs to be planted, the timing of planting and management and maintenance responsibilities.
- b) Tree locations and planting specifications where adjacent to or within the highway.
- c) The design and location of incidental green/informal spaces/enclosures.
- d) The design and location of key focal points.

Hard Landscaping

A Hard Landscaping Scheme that includes:

- a) The design and location of all bus stops and shelters.
- b) The design and location of all CCTV cameras and associated cabling.
- c) The design and location of all cycle parking stands and shelters.
- d) The design and location of all seating.
- e) The design and location of all bollards, signage and bins.
- f) Samples of paving materials and finishes.
- g) Details of carriageway materials and finishes.
- h) Proposed levels changes.
- i) A strategy for the provision of public utilities equipment which includes consultation with statutory undertakers and agreement in respect of the location and appearance of statutory undertakers' plant, compounds and associated structures.

Public Art Strategy

- a) The submission of a Public Art Strategy in accordance with the requirements of the relevant schedule of the S106 agreement and conditions 64, 65 and 66 of this permission.

Lighting

A Lighting Scheme that includes:

- a) The design and location of all lighting, including amenity lighting, within the Circus and Piazza, including guidance on the height of the lighting columns and the types, colour and brightness of proposed lights, and measures to limit light pollution.

Coordinated Development

- a) Consideration of how the proposed design and layout of the Piazza will integrate with plans and scheduling for works within the extended Piazza promoted as part of the Forum site adjacent.
- b) Consideration of how the proposed design and layout of the Circus and Piazza will integrate with the Boulevard, the Cambridgeshire Guided Busway and proposed alterations to Robinson Way.
- c) The provision of detailed design principles to be used to guide the detailed design of the public realm on the proposed development parcels where they adjoin the Circus and Piazza.

Phasing

- a) Detailed guidance on how the provision of the Circus and Piazza and those elements that are contained within it are to be provided.

Management and Maintenance

A Management and Maintenance Strategy that identifies:

- a) Responsibilities for all elements, including SUD's, contained within the Circus and Piazza.

Should the detailed design and/or location of any of the items listed not be included within the Public Realm Design Strategy, then the phased provision of such information shall be agreed in writing with the Local Planning Authority prior to the commencement of works within the Circus and Piazza. The approved Public Realm Design Strategy shall be carried out in accordance with the agreed details, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of the amenity of the intended users of the Circus and Piazza and to secure a high quality environment that is befitting the strategic importance of the space (Cambridge Local Plan 2006 policies 3/4, 3/7, 3/11, 3/12, 4/15, 8/4, 9/3 and 9/5).

Off-Site Highways Works

- 63. No occupation of any floorspace for clinical research and treatment (D1 and/or clinical in-patient treatment), or biomedical and biotech research and development (B1b) or higher education building under use classes B1 and D1 or sui generis medical research institute uses shall take place until the offsite highways works at Hills Road/Fendon Road/Robinson Way shall have been fully laid out and implemented in accordance the approved schemes/plans in the Highway Design Report prepared by Lanmor Consulting dated March 2015, reference 140546/DS/KTP/01 Rev C.

Reason: In order to safeguard highway safety and network capacity (Cambridge Local Plan 2006 policies 3/7, 8/2 and 8/11).

Public Art Details

64. Where the approved Public Art Strategy secured under the S106 agreement associated with this application indicates, a reserved matters application shall include the following details of public art to be provided within that relevant phase:

- a) Details of the consultation, approval and commissioning process for artists and associated proposed public art.
- b) Details of community engagement and consultation including measures to promote public involvement in the evolution of the public art.
- c) Descriptions, plans and images of the public art that will be realised.
- d) Details of how the public art complies with any approved public realm strategy for the development.
- e) Project timescales.
- f) Delivery mechanisms.
- g) The total amount allocated for the proposed public art including a breakdown of the total cost of the implementation of the public art and the apportionment of the costs across its various elements, including maintenance and decommissioning costs (if applicable).

Reason: To ensure that the details of public art come forward at the appropriate stage in the planning process in accordance with the Public Art Strategy and that the proposed public art positively contributes to its context within the public realm (Cambridge Local Plan policies 3/4, 3/7, 3/11, 3/12, 9/5 and 10/1).

Public Art Maintenance and Implementation Details

65. No development of a reserved matters phase that contains an approved element of public art within it shall commence until such time as the following implementation and maintenance details have been submitted to and approved in writing by the Local Planning Authority:

- a) Phasing and dates for the installation of the approved public art.
- b) Legal ownership and insurance details.
- c) Responsibility for implementation.
- d) Responsibility for maintenance and maintenance schedules.
- e) Details of decommissioning including timescales and reparation (if applicable).

Reason: To ensure that details of the maintenance and implementation of public art come forward at the appropriate stage in the planning process and that details surrounding subsequent ownership, maintenance, insurance and decommissioning are thoroughly considered (Cambridge Local Plan policies 3/4, 3/7, 3/11, 3/12, 9/5 and 10/1).

Provision and Maintenance of Public Art

66. In relation to any reserved matters phase containing an approved element of public art, the public art as defined in the S106 agreement shall be provided and managed and maintained in accordance with the approved Public Art Strategy secured under the S106 agreement and the approved public art details and the approved public art implementation and maintenance details unless otherwise agreed in writing by the Local Planning Authority. The public art shall not be moved or removed once implemented either permanently or temporarily other than in accordance with the agreed details or other written approval of the Local Planning Authority.

Reason: To ensure that the public art is implemented at an appropriate stage in the phased development of the site and that the public art once provided is properly managed and maintained (Cambridge Local Plan policies 3/4, 3/7, 3/11, 3/12, 9/5 and 10/1).

Tree Protection Addenbrookes Roundabout

67. Details of the specification and position of fencing, or any other measures to be taken for the protection of any trees from damage during the course of development, shall be submitted to the local planning authority for its written approval, and implemented in accordance with that approval before any equipment, machinery or materials are brought onto the site for the purpose of the Addenbrooke's roundabout upgrade development required under condition 63 of this permission. The agreed means of protection shall be retained on site until all equipment, and surplus materials have been removed from the site. Nothing shall be stored or placed in any area protected in accordance with this condition, and the ground levels within those areas shall not be altered nor shall any excavation be made.

Reason: To protect the visual amenity of the area and to ensure the retention of the trees on the site. (Cambridge Local Plan 2006 policies 3/4, 3/11 and 4/4).

Informatives

Section 73 approval

The original outline planning permission 06/0796/OUT continues to subsist, as well as this new outline approval granted under Section 73 of the Town and Country Planning Act 1990.

Notwithstanding this permission pursuant to section 73, any reserved matters which have been submitted and approved pursuant to the original outline permission 06/0796/OUT to date, will continue to be regarded by the Council as approved reserved matters.

Environmental Health

Due to the proximity of this site to existing residential premises and other noise sensitive premises, impact pile driving is not recommended.

New development can sometimes cause inconvenience, disturbance and disruption to local residents, businesses and passers by. As a result the City Council runs a Considerate Contractor Scheme aimed at promoting high standards of care during construction. The City Council encourages the developer of the site, through its building contractor, to join the scheme and agree to comply with the model Code of Good Practice, in the interests of good neighbourliness. Information about the scheme can be obtained from The Considerate Contractor project Officer in the Planning Department (Tel: 01223 457121).

In relation to environmental construction noise impact we recommend the developer uses the standard the City Council requires in relation to noise levels when letting contracts, known as clause 109 Noise Control.

The developer is advised to contact the Health & Safety Executive, 14 Cardiff Road, Luton, LU1 1PP: -Tel No: 01582 444200 concerning health and safety regulation requirements associated with the construction and operational phases.

To satisfy the condition relating to noise insulation, the noise level from all plant and equipment, vents etc (collectively) associated with this application should not raise the existing background level (L90) by more than 3 dB(A) both during the day (0700 to 2300 hrs over any one hour period) and night time (2300 to 0700 hrs over any one 5 minute period), at the boundary of the premises subject to this application and having regard to noise sensitive premises. Tonal/impulsive noise frequencies should be eliminated or at least considered in any assessment and should carry an additional 5 dB(A) correction. This is to guard against any creeping background noise in the area and prevent unreasonable noise disturbance to other premises.

It is recommended that the agent/applicant submits a noise prediction survey/report in accordance with the principles of BS4142: 1997 "Method for rating industrial noise affecting mixed residential and industrial areas" or similar. Noise levels shall be predicted at the boundary having regard to neighbouring residential premises.

Such a survey / report should include: a large scale plan of the site in relation to neighbouring premises; noise sources and measurement / prediction points marked on plan; a list of noise sources; details of proposed noise sources / type of plant such as: number, location, sound power levels, noise frequency spectrums, noise directionality of plant, noise levels from duct intake or discharge points; details of noise mitigation measures (attenuation details of any intended enclosures, silencers or barriers); description of full noise calculation procedures; noise levels at a representative sample of noise sensitive locations and hours of operation. Any report shall include raw measurement data so that conclusions may be thoroughly evaluated and calculations checked.

To satisfy the standard condition relating to fume filtration/extraction, it is recommended that an effective and appropriate odour/fume extract system be installed to ensure an odour nuisance is not caused to the occupiers of neighbouring premises. The system will need to deal with the two main phases of contaminants within cooking emissions: the particulate (grease, small food and smoke particles) and gaseous (odour vapour/volatile organic compounds).

It is recommended that flue terminals do not impede the final discharge termination point.

The flue / duct height should terminate at least one metre above the roof ridge level to which it is attached and a minimum operating efflux velocity of 10 to 15 metres a second should be achieved. However, the effectiveness of this system is dependent on buildings nearby. If buildings nearby are likely to have an effect on the dispersion and dilution of odour, the flue height should be at least one metre above the ridge of those buildings.

It is not likely that any significant ground remediation will be required at the site, although if any deposited materials are encountered the Local Planning Authority should be informed and the materials should be dealt with in an appropriate manner.

The applicants are advised that the ES has identified that buildings should be subject to gas protection measures to ensure any risk from the build up of dangerous gases is adequately mitigated.

Waste Management

The applicants are advised to contact Cambridgeshire County Council Waste Management Team to discuss the content of any outline or detailed Waste Management Plan prior to submission.

S106

This planning permission should be read in conjunction with the associated deed of planning obligation prepared under s.106 of the Town and Country Planning Act 1990 (as amended). References in the conditions to the S106 agreement are references to that associated deed.

Strategic and On-Plot Surface Water Drainage Strategies

The applicants are advised that notwithstanding the submitted Flood Risk Assessment, that strategic and on-plot surface water drainage strategies should demonstrate that the minimum discharge rate from any control structure is no less than 3 l/sec. The overall discharge rate for the site to remain unchanged. Site-specific strategies shall be within the management, maintenance and responsibility of a single site-wide management company. This is to ensure that drainage within the site is strategically managed and to minimise the risk of flooding to property and land. The discharge rates shown in Appendix C revision 29/05/07 with 5 flow controls for the site with varying flow rates are acceptable, in principle, to the Environment Agency.

Trees

The applicants are advised to appoint a competent arboriculturalist to oversee the project. The arboriculturalist should monitor, record and confirm the implementation and maintenance of tree protection measures as set out in the conditions of the planning permission. All arboricultural works should be carried out by a competent tree contractor, proficient in both root zone and aerial arboricultural work and shall follow strictly the agreed method statements and specifications. The applicants are advised to arrange a pre-construction site meeting between site agent, the developer's chosen arboriculturalist and the Council's delegated arboricultural officer.

Considerate Contractors

New development can sometimes cause inconvenience, disturbance and disruption to local residents, businesses and passers by. As a result the City Council runs a Considerate Contractor Scheme aimed at promoting high standards of care during construction. The City Council encourages the developer of the site, through its building contractor, to join the scheme and agree to comply with the model Code of Good Practice, in the interests of good neighbourliness. Information about the scheme can be obtained from The Considerate Contractor Project Officer in the Planning Department (Tel: 01223 457121).

Cycle Parking

The level of staff cycle parking provision for a building that is estimated to have 2,778 staff would be calculated as follows: 2,222 (or 80%) of those staff would be assumed to be on site on a typical day. The 2006 cycling mode share from the Addenbrooke's Travel Survey for staff is 25%. 10% would be added (i.e. 35%) meaning that the number of staff cycle parking spaces that would have to be provided would be 778.

The level of patient and visitor cycle parking provision for a building which is estimated to have 526 patients and visitors would be calculated as follows: The 2006 cycling mode share for patients and visitors from the Addenbrooke's Travel Survey is 3%. 10% would be added (i.e. 13%). Given that it is assumed that cycle parking spaces will turn over 3 times per day, the number of patient and visitor cycle parking spaces that would have to be provided for would be 23.

Recommended Planting Mix

The following woodland planting mixes are recommended:

East and West of the Railway Line

(to be planted at 1.5m centres in groups of 5-7 of the same species)

Species	Planting size cm	% mix
Quercus robur	Feathered 125/150	10
Fraxinus excelsior	10-12	5
Tilia cordata	10-12	5
Prunus avium	10-12	5
Taxus baccata	100/125	15
Acer campestre	Feathered 125/150	15
Ilex aquifolium	60-80	15
Crataegus monogyna	60-80	20
Corylus avellana	60-80	10

Within the woodland belt to the east of the railway line (20/20 site) the mix should be supplemented with 14-16cm girth *Tilia cordata* and *Fraxinus excelsior* trees on a double planting grid of 15m north-south as shown on plan 1700/SK180707.01B (which may or may not be staggered depending on the final design) or a grid to coincide with the wider areas of the planting belt. Within the woodland belt to the west of the railway (Hobsons Brook GC) the mix shall be supplemented as above on a planting grid to be agreed.

N.B. The planting on the west of the railway must not be compromised by the spoil deposit from Clay Farm, i.e. the bunding adjacent to the railway.

Woodland Mix for South of 20/20 adjacent to Nine Wells

(to be planted at 1.5m centres in groups of 5-7 of the same species)

Species	Planting size cm	% mix
Fagus sylvatica	Feathered 125/150	10
Sorbus torminalis	10-12	5
Quercus robur	Feathered 125/150	5
Prunus avium	12-14	5
Taxus baccata	100/125	15
Acer campestre	Feathered 175/200	15
Ilex aquifolium	60-80	15
Crataegus monogyna	60-80	20
Corylus avellana	60-80	10

Compliance with paragraphs 186 & 187 of the National Planning Policy Framework

The Local Planning Authority has worked proactively with the applicant to ensure that the proposed development is acceptable in planning terms. All land use planning matters have been given full consideration and the applicant has responded positively to the advice and recommendations provided by consultees. Proactive consultation took place with statutory consultees, which resulted in overall support for the development proposal.

This decision notice relates to the following drawings:

Approved Aukett Fitzroy Robinson Plan List		Revision
Red Line Plan	4626M/PL/80001	E
PP1 Location of Land Uses	4626M/PL/80002	H
PP2 Maximum Building Heights & Maximum Building Envelope	4626M/PL/80003	L
PP3 maximum Building Height Sections	4626M/PL/80004	K
PP4 Minimum Building Heights and Maximum Building Envelope	4626M/PL/80005	J
PP5 Minimum Building Height Sections	4626M/PL/80006	J
PP6 Landscape Provisions	4626M/PL/80011	S
PP7 Access – Roads	4626M/PL/80007	D
PP8 Access – Public Transport	4626M/PL/80010	E
PP9 Access – Pedestrian	4626M/PL/80009	F
PP10 Access - Cycle	4626M/PL/80008	E

It is important the development is carried out fully in accordance with these plans. If you are an agent, please ensure that your client has a copy of them and that they are also passed to the contractor carrying out the development. A copy of the approved plan(s) is/are kept on the planning application file.

It is important that all conditions particularly pre-commencement conditions are fully complied with, and where appropriate, discharged prior to the implementation of the development. Failure to discharge such conditions may invalidate the planning permission granted. The development must be carried out fully in accordance with the requirements of any details approved by condition.

This decision notice does not convey any approval or consent which may be required under any enactment, bye-law, order or regulation other than Section 57 of the Town and Country Planning Act 1990.

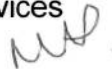
Your attention is specifically drawn to the requirements of the Chronically Sick and Disabled Persons Act 1970, the Disabled Persons Act 1981, to the British Standards Institution Code of Practice for Access for the Disabled to Buildings (BS 5810 1979), to Part M of the Building Regulations 1991, and to BS 5588 Part 8 1988 (Code of Practice for means of escape for disabled persons). The development should comply with these requirements.

For further information please go to www.cambridge.gov.uk/planning.

Dated: 2 April 2015



Head of Planning Services



SEE NOTES ATTACHED

PLANNING PERMISSION

1. 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 permission subject to conditions, then you can appeal to the First Secretary of State under section 78 of the Town & Country Planning Act 1990.

If you want to appeal then you must do so within 6 months of the date of this notice or within 12 weeks of the date of the decision notice against a refusal of any householder or minor commercial planning application, using a form which you can get from the Planning Inspectorate at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN (Tel: 0303 444 5000) or from www.planningportal.gov.uk/pes

The Secretary of State can allow for 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 they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

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

2. 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 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 (District Council, London Borough Council or Common Council of the City of London) 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 & Country Planning Act 1990.

LISTED BUILDING CONSENT, CONSERVATION AREA CONSENT

3. Notification of Demolition

If listed building consent has been granted and any demolition is to take place, you must in accordance with Section 8(2)(b) of the Planning (Listed Building and Conservation Areas) Act 1990 complete a Final Notice of Demolition Form and send it to English Heritage at least one month before demolition occurs.

4. Appeals to the Secretary of State

If you are aggrieved by the decision of your local planning authority to refuse listed building or conservation area consent, or to grant either subject to conditions then you may appeal to the Secretary of State for the Environment in accordance with sections 20 and 21 of the Planning (Listed Building and Conservation Areas) Act 1990. Appeals must be made within 6 months of the date of the decision (see notes under 1 above).

5. Purchase Notice

If listed building or conservation area consent is refused, or if either is granted subject to conditions, and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he may serve on the District Council in which the land is situated a purchase notice requiring the council to purchase his interest in the land in accordance with section 32 of the Planning (Listed Building and Conservation Areas) Act 1990.

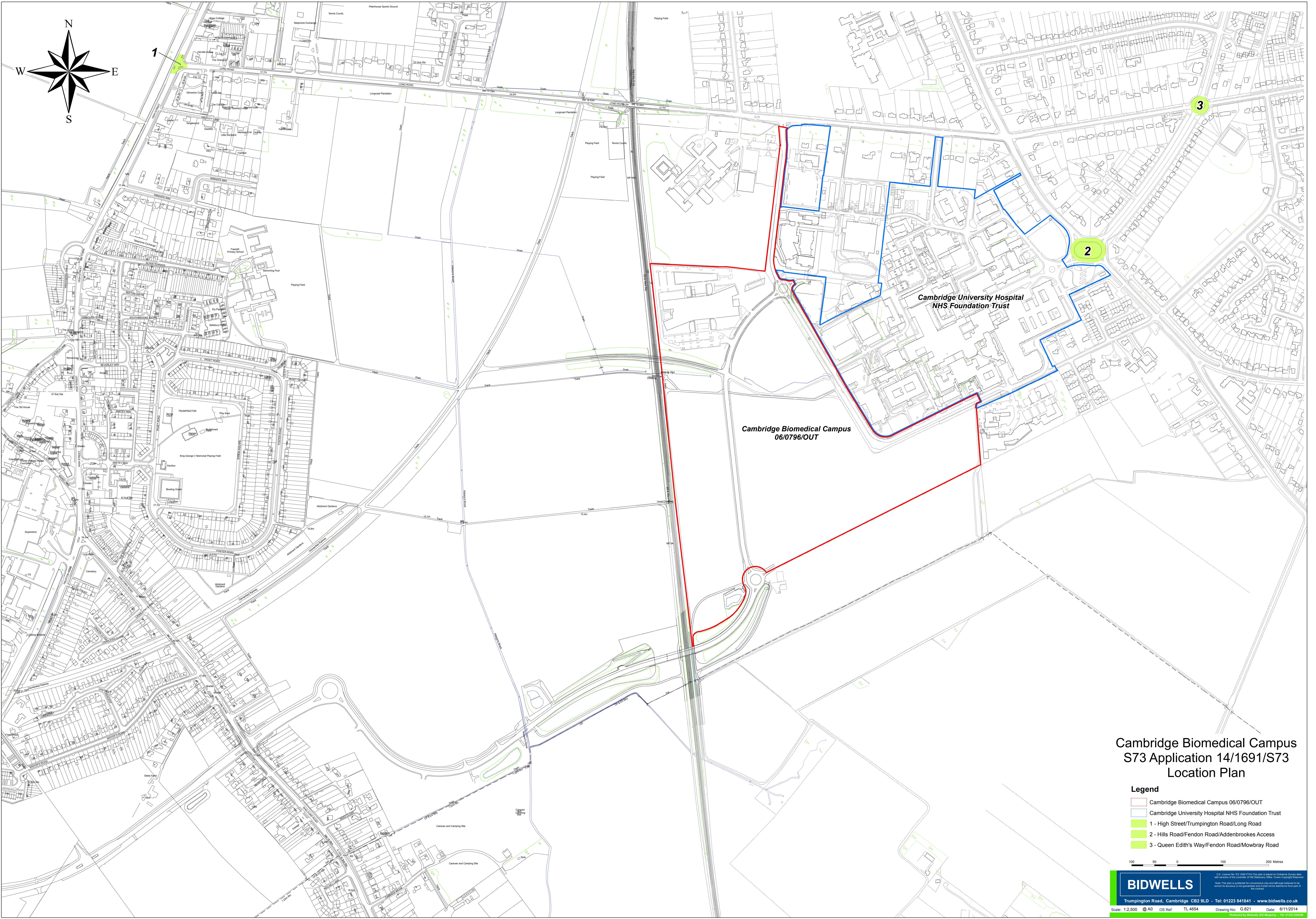
6. Compensation

In certain circumstances a claim may be made against the local planning authority for compensation as provided for under Section 27 of the Planning (Listed Building and Conservation Areas) Act 1990.

CONSENT TO DISPLAY AN ADVERTISEMENT

7. Appeals to the Secretary of State

If you are aggrieved by the decision of the local planning authority to refuse consent to display an advertisement, or to grant consent subject to conditions then you may appeal to the Secretary of State for the Environment under Regulation 15 of the Town and Country Planning (Control of Advertisements) Regulations 1992. Appeals must be made within 8 weeks of the date of the decision (see notes under 1 above)



Cambridge Biomedical Campus
S73 Application 14/1691/S73
Location Plan

- Legend**
- Cambridge Biomedical Campus 06/0796/OUT
 - Cambridge University Hospital NHS Foundation Trust
 - 1 - High Street/Trumpington Road/Long Road
 - 2 - Hills Road/Fendon Road/Addenbrookes Access
 - 3 - Queen Edith's Way/Fendon Road/Mowbray Road

100 50 0 100 200 Metres

BIDWELLS

Trumpington Road, Cambridge CB2 9LD - Tel: 01223 841841 - www.bidwells.co.uk

Scale: 1:2,500 @ A0 OS Ref: TL4654 Drawing No: G.821 Date: 6/11/2014

Produced by Bidwells GIS Mapping - Tel: 01223 855288

Appendix 5

CAMBRIDGE CITY COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

OUTLINE PLANNING PERMISSION

SUBJECT TO CONDITIONS

Ref: 16/0176/OUT



Mr Guy Kaddish
Bidwells LLP
Bidwell House
Trumpington Road
Cambridge
Cambridgeshire
CB2 9LD

The Council hereby grant outline planning permission for

Development of up to 75,000 sqm floorspace (excluding plant areas) of Research and Development (B1b) and Clinical (C2 and/or D1), sui generis and higher education uses, including related support activities within use class B1; ancillary uses in addition (A1, A3, A4, A5, D1 and/or D2); up to two multi storey car parks; open space and landscaping and all other associated supporting infrastructure.

at

**Land South Of Dame Mary Archer Way Cambridge Biomedical Campus
Cambridge Cambridgeshire**

in accordance with your application received 2nd February 2016 and the plans, drawings and documents which form part of the application, subject to the conditions set out below:

1. Approved Plans

The development hereby permitted shall be carried out in accordance with the following approved plans:

Location Plan MP-A(10)110 P3

Site Plan MP-A(10)111 P1

Parameter Plan 1 - Land Use MP-A(10)101 P11

Parameter Plan 2 - Maximum building heights MP-A(10)102 P9

Parameter Plan 3 - Access MP-A(10)106 P8

Parameter Plan 4 - Open Space and Landscape Framework MP-A(10)103 P8

Parameter Plan 5 - Development Principles MP-A(10)108 P6

Reason: In the interests of good planning, for the avoidance of doubt and to facilitate any future application to the Local Planning Authority under Section 73 of the Town and Country Planning Act 1990.

2. Reserved Matters

No development on any individual phase shall commence until approval of the details of the access, appearance, landscaping, layout and scale (hereinafter called the reserved matters) within that phase has been obtained from the local planning authority in writing. The development shall be carried out as approved.

Reason: To ensure that all necessary details are acceptable (Cambridge Local Plan 2006 policies 3/2, 3/4, 3/7, 3/11, 3/12, 4/2, 4/3, 4/4, 9/3, 9/8).

3. The first application for approval of reserved matters shall be made to the local planning authority no later than five years from the date of this permission.

Reason: In accordance with the requirements of section 51 of the Planning and Compulsory Purchase Act 2004.

4. The development of each phase pursuant to this outline consent shall begin before the expiration of two years from the date of the last reserved matter of that phase to be approved.

Reason: To prevent the accumulation of unimplemented planning permissions and in accordance with the requirements of section 51 of the Planning and Compulsory Purchase Act 2004.

5. Application(s) for approval of all the reserved matters shall be made to the local authority before the expiration of nine years from the date of this permission.

Reason: To prevent the accumulation of unimplemented planning permissions and in accordance with the requirements of section 51 of the Planning and Compulsory Purchase Act 2004.

6. Phasing

Prior to or concurrently with the submission of the first reserved matters application for any development on the site, an Initial Site Wide Phasing Plan which accords with the S106 triggers shall be submitted to the local planning authority for approval. From the date of approval of the Initial Site-Wide Phasing Plan an annual Update Site Wide Phasing Plan shall thereafter be submitted to the local planning authority for information each year of the nine year period hereby approved (condition 5) for submission of reserved matters, unless all reserved matters have already been submitted prior to this date.

The Initial Site Wide Phasing Plan shall include the sequence of the following elements:

- a) provision of the reserved matters parcels
- b) provision of the major distributor roads/routes within the site and the design of possible future transport spurs to the southern edge of the site
- c) strategic foul surface water features and SUDS
- d) car parking
- e) diversion of high pressure gas main
- f) cycle and pedestrian links
- g) strategic electricity and telecommunications networks
- h) environmental mitigation measures and landscaped areas

In addition, an Update Position Statement shall be submitted prior to or concurrently with the first reserved matters including:

- i) estimated timing of outstanding clinical and research and development plots delivery within Phase 1 (that development subject to 06/0796/OUT or as subsequently amended by any S73 application(s)) that have not received planning approval upon the granting of outline permission for Phase 2
- j) energy innovation centre delivery Phase 1
- k) any other developments within Phase 1 that have received planning approval but not yet been constructed upon the granting of outline permission for Phase 2.

No development approved under the first reserved matters application shall commence until such time as the Initial Site-Wide Phasing Plan has been approved. The annual Update Site Wide Phasing Plans, submitted to the LPA for information, shall provide a position statement on progress and delivery of all of the above elements a) - h). The development shall be carried out in accordance with the approved details.

Reason: To clarify how the site is to be phased to assist with the determination of subsequent reserved matters applications and in order to ensure that major infrastructure provision and environmental mitigation is provided in time to cater for the needs and impacts arising out of the development and given that there are a number of unimplemented clinical and research and development plots remaining within Phase 1, to ensure satisfactory coordination of the overall Cambridge Biomedical Campus as a whole.

7. Environmental Information

The development shall be carried out in accordance with the mitigation measures as set out in the CBC Phase 2 Environmental Statement, dated February 2016, and take account of assumptions and information contained within the following Technical Notes:

- a) CBC Phase 2 AECOM Response to EHO Comments Prepared 18th April 2016/ Approved 22 April 2016;

b) CBC Phase 2 AECOM Response to CCC Comments Prepared 22 March 2016 / Approved 13 April 2016;

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement (Cambridge Local Plan policies 9/3, 9/8 and 10/1).

8. Provision of Transport Spurs for Campus Expansion

In the event that land to the south of the site is adopted for the future provision of a Phase 3 of the Cambridge Biomedical Campus as part of proposed allocation E/1B of the proposed South Cambridgeshire Local Plan 2013, then:

a) Notwithstanding the approved plan Parameter Plan Three unless agreed otherwise in writing by the Local Planning Authority any reserved matters for the primary transport route through the site as shown on approved plan Parameter Plan Three, shall include a detailed design of transport spurs to the southern edge of the site for the purposes of access to and from the site for vehicles, pedestrians and cyclists; and

b) The reserved matters for the primary transport route shall include the proposed timing of the provision of the route together with timing for provision of the spurs, whether together as part of the Phase 2 infrastructure provision or separately

c) If the spurs are constructed separately and at a later time to the primary transport route, the reserved matters submitted as part of criterion 8(a) above shall include the details of temporary junctions that are capable of being upgraded to accommodate the transport spurs.

The development of the primary transport route and the transport spurs shall be carried out in accordance with the approved reserved matters.

Reason: To ensure the detailed design of the primary route includes spurs to the southern boundary of the site to safeguard the possible future expansion of the Biomedical Campus as part of a co-ordinated development (Cambridge Local Plan policies 3/6, 3/7, 9/2, 9/3, 10/1).

9. Non-Road Mobile Machinery Plant

All Non-Road Mobile Machinery (NRMM) of net power between 37kW and 560 kW used during demolition or construction works or similar, shall meet the emissions standards in Stage IIIA of EU Directive 97/68/ EC (as amended) for both Nitrogen Oxides (NOx) and Particulate matter (PM). If Stage IIIA equipment is not available the requirement may be met using the following techniques:

- a) Reorganisation of NRMM fleet
- b) Replacing equipment

- c) Retrofit abatement technologies
- d) Re-engining

All eligible NRMM shall meet the requirement above unless it can be demonstrated that the machinery is not available or that a comprehensive retrofit for both PM and NOx is not feasible. In this situation every effort should be made to use the least polluting equipment available including retrofitting technologies to reduce particulate emissions. Developers will be required to provide a written statement of their commitment and ability to meet the requirement within their Construction and Demolition Management plans. An inventory of all NRMM must be kept on site and all machinery should be regularly serviced and service logs kept on site for inspection. Records should be kept on site which details proof of emission limits for all equipment. This documentation should be made available to local authority officers as required.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

10. Energy Demand

The total energy demand to be supplied by locally polluting combustion sources (such as but not limited to natural gas, biogas, biodiesel, diesel and biomass) for buildings coming forward under each individual Reserved Matters application as part of the CBC Phase 2 development shall not exceed 350 W/m² (energy demand includes heating, ventilation, air conditioning, process energy requirements, including the normal regular operation of back-up plant).

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

11. Low NOx boilers

The development hereby approved shall utilise low NOx boilers, i.e., boilers that meet a dry NOx emission rating of 40mg/kWh, to minimise emissions from the development that may impact on air quality. Details of the boilers for each building shall be submitted to the local planning authority for approval prior to installation within any building approved under a Reserved Matters Application. All boilers shall be installed in accordance with the approved details prior to first occupation of that building and retained thereafter. A manufacturer's NOx emission test certificate or other evidence to demonstrate that every installed boiler meets the approved emissions standard shall be submitted to and approved by the local planning authority. The details shall demonstrate compliance with the agreed emissions limits. The scheme as approved shall be fully carried out in accordance with the approved details before first occupation and shall be thereafter retained.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives and accords with the requirements of the National Planning Policy Framework (NPPF) and policies 4/13 & 4/14 of the Cambridge Local Plan 2006.

12. Combined Heat and Power

Any gas-fired CHP must meet an emissions standard of:

- a) Spark ignition engine: less than 150 mgNOx/Nm³
- b) Compression ignition engine: less than 400 mgNOx/Nm³
- c) Gas turbine: less than 50 mgNOx/Nm³

A manufacturer's NOx emission test certificate or other evidence to demonstrate that every installed boiler meets the approved emissions standard shall be submitted to and approved by the local planning authority. The details shall demonstrate compliance with the agreed emissions limits. The scheme as approved shall be fully carried out in accordance with the approved details before first occupation and shall be thereafter retained.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

13. Combustion Plant

Details of any combustion appliance / plant shall be submitted to and approved in writing by the local planning authority prior to installation. These details shall include the selected plant (including size / rating, abatement equipment, technologies, location/ height of exhaust stack / flue and discharge velocity, NOx emissions standards, as appropriate), their emissions and maintenance schedule.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

14. EV Charge Points

A minimum of 3% of car park spaces shall have electric vehicle charge points installed at the point of construction and a minimum of 15% of car parking spaces shall have infrastructure for the future provision of electric vehicle charge points.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

15. Link to Energy Centre

Within each reserved matters application for a clinical building for Cambridge University Hospitals NHS Foundation Trust a strategy for energy for that building shall be submitted to the local planning authority. The strategy shall set out how the building will connect to, or allow for future connection to, any existing or future hospital energy centre unless otherwise demonstrated that it is technically or viably impractical or does not represent the most sustainable approach. The strategy shall include a plan showing the pipe route and connection point to the wider network, high level technical specification and date of implementation and connection. The development shall be carried out in accordance with the approved strategy.

Reason: To protect local air quality and human health by ensuring that the production of air pollutants such as nitrogen dioxide and particulate matter are kept to a minimum during the lifetime of the development, to contribute toward National Air Quality Objectives in accordance with the National Planning Policy Framework (NPPF) and policy 4/14 of the Cambridge Local Plan (2006).

16. Lighting - Individual Development Plots

Prior to the commencement of use of an individual building plot an artificial lighting scheme shall be submitted to and approved in writing by the local planning authority. The scheme shall include details of any artificial lighting of the site and an artificial lighting impact assessment with what the predicted lighting levels at the nearest light sensitive receptor shall be. Artificial lighting on and off site must meet the Obtrusive Light Limitations for Exterior Lighting Installations contained within the Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light - GN01:2011 for Environmental Zone E2 (or as superseded). The approved lighting scheme shall be installed, retained and operated in accordance with the approved details and measures.

Reason: In the interests of visual amenity and to ensure that the development will not result in unacceptable light pollution (Cambridge Local Plan 2006 policies 3/11, 4/13 and 4/15).

17. Plant Noise Insulation

Before the development/use hereby permitted is occupied for any approved reserved matters application, a scheme for the insulation of any plant in order to minimise the level of noise emanating from the plant shall be submitted to and approved in writing by the local planning authority and the scheme as approved shall be fully implemented before the use hereby permitted is commenced and shall be retained thereafter.

Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2006 policy 4/13).

18. Extraction Equipment

Prior to the occupation/use of a building, details of equipment for the purpose of extraction and filtration of fumes, odours and/or hazardous material such as airborne bacterial and viral organisms shall be submitted to and approved in writing by the local planning authority. The approved extraction/filtration scheme shall be installed before the use hereby permitted is commenced and shall thereafter be retained as such.

Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2006 policy 4/13).

19. Site Wide Demolition and Construction Environmental Management Plan

Prior to the commencement of development, a site wide Demolition and Construction Environmental Management Plan (DCEMP) shall be submitted to and approved in writing by the local planning authority. The DCEMP shall include the consideration of the following aspects of demolition and construction:

a) Demolition, construction and phasing programme.

- b) Contractors' access arrangements for vehicles, plant and personnel including the location of construction traffic routes to, from and within the site, details of their signing, monitoring and enforcement measures.
- c) Construction/Demolition hours which shall be carried out between 0800 hours to 1800 hours Monday to Friday, and 0800 hours to 1300 hours on Saturday and at no time on Sundays, Bank or Public Holidays, unless in accordance with agreed emergency procedures for deviation. Prior notice and agreement procedures for works outside agreed limits and hours.
- d) Delivery times for construction/demolition purposes shall be carried out between 0800 to 1800 hours Monday to Friday, 0800 to 1300 hours on Saturdays and at no time on Sundays, bank or public holidays, unless otherwise agreed in writing by the local planning authority in advance.
- e) Soil Management Strategy.
- f) Noise method, monitoring and recording statements in accordance with the provisions of BS 5228-1: 2009.
- g) Maximum noise mitigation levels for construction equipment, plant and vehicles.
- h) Vibration method, monitoring and recording statements in accordance with the provisions of BS 5228-2: 2009.
- i) Maximum vibration levels.
- j) Dust management and wheel washing measures in accordance with the provisions of Control of dust and emissions during construction and demolition - supplementary planning guidance 2014
- k) Prohibition of the burning of waste on site during demolition/construction.
- l) Site lighting.
- m) Drainage control measures including the use of settling tanks, oil interceptors and bunds.
- n) Screening and hoarding details.
- o) Access and protection arrangements around the site for pedestrians, cyclists and other road users.
- p) Procedures for interference with public highways, including permanent and temporary realignment, diversions and road closures.
- q) External safety and information signing and notices.
- r) Consideration of sensitive receptors.
- s) Prior notice and agreement procedures for works outside agreed limits.
- t) Complaints procedures, including complaints response procedures.
- u) Membership of the Considerate Contractors Scheme.

Reason: To protect the amenity of the adjoining properties (Cambridge Local Plan 2006, policy 4/13).

20. Construction Method Statement

Prior to the commencement of development of any approved reserved matters phase, a Construction Method Statement (CMS) shall be submitted to and approved in writing by the local planning authority for that phase. The CMS shall demonstrate how the construction of the reserved matters approval accords with the construction criteria A-U of the Site Wide Demolition and Construction Environmental Management Plan (DCEMP). In addition to criteria A-U, the CMS shall also provide a specific construction programme and plan identifying: the contractor site storage area/compound; screening and hoarding locations; access arrangements for vehicles, plant and personnel; building material, plant and equipment storage areas; contractor parking arrangements for construction and personnel vehicles; and the location of the contractor offices. Thereafter the development shall be undertaken in accordance with the agreed details.

Reason: To ensure the environmental impact of the construction of the development is adequately mitigated and in the interests of the amenity of nearby residents/occupiers (Cambridge Local Plan 2006, policy 4/13).

21. Contaminated Land - Gas Risk

Should the contaminated land assessment and associated remedial strategy identify the presence of material with the potential to generate an identifiable ground gas risk for a building, prior to the commencement of development of that building, a specification for gas protection to be incorporated into the building design to prevent build-up of potentially asphyxiating gases shall be submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason: In order to safeguard the health and safety of future occupants of the buildings (Cambridge Local Plan 2006, policy 4/13).

22. Submission of Preliminary Contamination Assessment

Prior to the commencement of the development (or phase of) or investigations required to assess the contamination of the site, the following information shall be submitted to and approved in writing by the local planning authority:

(a) Desk study to include:

- Detailed history of the site uses and surrounding area (including any use of radioactive materials)
- General environmental setting.
- Site investigation strategy based on the information identified in the desk study.

(b) A report setting set out what works/clearance of the site (if any) is required in order to effectively carry out site investigations.

Reason: To adequately categorise the site prior to the design of an appropriate investigation strategy in the interests of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

23. Submission of Site Investigation Report and Remediation Strategy:

Prior to the commencement of the development (or phase of) with the exception of works agreed under condition 22 and in accordance with the approved investigation strategy agreed under clause (b) of condition 22, the following shall be submitted to and approved in writing by the local planning authority:

(a) A site investigation report detailing all works that have been undertaken to determine the nature and extent of any contamination, including the results of the soil, gas and/or water analysis and subsequent risk assessment to any receptors .

(b) A proposed remediation strategy detailing the works required in order to render harmless the identified contamination given the proposed end use of the site and surrounding environment including any controlled waters. The strategy shall include a schedule of the proposed remedial works setting out a timetable for all remedial measures that will be implemented.

Reason: To ensure that any contamination of the site is identified and appropriate remediation measures agreed in the interest of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

24. Implementation of Remediation

Prior to the first occupation of the development, or each phase of the development where phased, the remediation strategy approved under clause (b) to condition 23 shall be fully implemented on site following the agreed schedule of works.

Reason: To ensure full mitigation through the agreed remediation measures in the interests of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

25. Completion Report

Prior to the first occupation of the development (or phase of) hereby approved the following shall be submitted to, and approved by the local planning authority:

(a) A completion report demonstrating that the approved remediation scheme as required by condition 23(b) and implemented under condition 24 has been undertaken and that the land has been remediated to a standard appropriate for the end use.

(b) Details of any post-remedial sampling and analysis (as defined in the approved Material Management Plan pursuant to condition 26) shall be included in the completion report along with all information concerning materials brought onto, used, and removed from the development. The information provided must demonstrate that the site has met the required clean-up criteria.

Thereafter, no works shall take place within the site such as to prejudice the effectiveness of the approved scheme of remediation.

Reason: To demonstrate that the site is suitable for approved use in the interests of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

26. Material Management Plan

Prior to the importation or reuse of material for the development (or phase of) a Materials Management Plan (MMP) shall be submitted to and approved in writing by the Local Planning Authority. The MMP shall include:

- a) Details of the volumes and types of material proposed to be imported or reused on site
- b) Details of the proposed source(s) of the imported or reused material
- c) Details of the chemical testing for ALL material to be undertaken before placement onto the site.
- d) The results of the chemical testing which must show the material is suitable for use on the development
- e) Confirmation of the chain of evidence to be kept during the materials movement, including material importation, reuse placement and removal from and to the development.

All works will be undertaken in accordance with the approved document.

Reason: To ensure that no unsuitable material is brought onto the site in the interests of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

27. Unexpected Contamination

If unexpected contamination is encountered whilst undertaking the development which has not previously been identified, works shall immediately cease on site until the Local Planning Authority has been notified and/or the additional contamination has been fully assessed and remediation approved following steps (a) and (b) of condition 23 above. The approved remediation shall then be fully implemented under condition 24.

Reason: To ensure that any unexpected contamination is rendered harmless in the interests of environmental and public safety in accordance with Cambridge Local Plan 2006, policy 4/13.

28. Emergency or Back-Up Generator

Before any approved reserved matters parcel is occupied, if an emergency generator is to be installed, a scheme for its insulation in order to minimise the level of noise emanating from the said generator shall be submitted to and approved in writing by the local planning authority. The scheme as approved shall be fully implemented before the use hereby permitted is commenced and shall thereafter be retained as such. The scheme shall include the following:

(i) Generator - Use

The generator shall only be used in the event of mains power failure or in accordance with (ii) below. It shall not be used as an alternative supply in the event of disconnection from the mains supply following for example non-payment.

(ii) Generator - Hours of Running for Maintenance

Running of the generator as part of routine maintenance and repair shall only take place for the length of time specified by the manufacturer between the hours of 8am - 6pm Monday to Friday, 9am -1pm Saturday and no time Sunday or Public Holidays.

Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2006, policy 4/13).

29. Construction/Demolition Noise

Prior to the commencement of any approved reserved matters parcel (including any pre-construction, demolition, enabling works or piling), the applicant shall submit a report in writing, regarding the demolition / construction noise and vibration impact associated with the reserved matters parcel, for approval by the local authority. The report shall be in accordance with the provisions of BS 5228:2009 Code of Practice for noise and vibration control on construction and open sites and include full details of any piling and mitigation measures to be taken to protect local residents, employees and patients from noise and/or vibration. Development shall be carried out in accordance with the approved details. Due to the proximity of this site to existing residential/clinical premises and other noise sensitive premises, impact pile driving is not recommended.

Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2006, policy 4/13).

30. Piling

In the event of the foundations for any approved reserved matters parcel requiring piling, prior to the development of the reserved matters parcel taking place, the applicant shall provide the local planning authority with a report/method statement for approval detailing the type of piling and mitigation measures to be taken to protect local residents, employees and patients from noise and/or vibration. Potential noise and vibration levels at the nearest noise sensitive locations shall be predicted in accordance with the provisions of BS 5228-1&2:2009 Code of Practice for noise and vibration control on construction and open sites. Development shall be carried out in accordance with the approved details. Due to the proximity of this site to existing residential premises and other noise sensitive premises, impact pile driving is not recommended.

Reason: To protect the amenity of the adjoining properties (Cambridge Local Plan 2006, policy 4/13).

31. On-Plot Cycle and Pedestrian Facilities

Within each reserved matters application details of the cycle and pedestrian facilities along the northern site boundary relevant to that phase, to provide necessary pedestrian and cycle connectivity on Dame Archer Way, will be provided. The work/scheme shall be constructed and completed in accordance with the approved plans prior to occupation of each phase of development.

Reason: To ensure appropriate priority to sustainable transport modes (Cambridge Local Plan, policies 8/4 and 8/5).

32. Off-Plot Cycle and Pedestrian Facilities

No occupation of a building shall take place until a programme of works and details (including phasing) for the following cycle and pedestrian connections has been submitted to and approved in writing by the Local Planning Authority and those works have been completed:

a) Crossing facilities at the Dame Mary Archer Way / Addenbrooke's Road / Francis Crick Avenue roundabout outside of adopted public highway as illustrated by drawing 60323976-SKE-C-0008-C and in accordance with any approved works to the adjacent Public Highway;

b) Crossing facilities at the Dame Mary Archer Way / Papworth Access junction as illustrated by drawing 60323976-SKE-C-0001-C, for the provision of signalised facilities;

No occupation of the reserved matters parcel for the closest proposed building to the following links shall take place until the following cycle and pedestrian connections, including a programme of works and details, have been submitted to and approved in writing by the Local Planning Authority and those works have been completed:

c) Cycle link to National Cycle Network route number 11 to the west boundary of the site as illustrated by drawing 60323976-SKE-C-0011-A;

d) Cycle link(s) to National Cycle Network route number 11 to the east boundary of the site as illustrated by drawing 60323976-SKE-C-0011-A.

The pedestrian and cycle connections shall be carried out in accordance with the approved details and phasing.

Reason: To ensure that the transport improvements are delivered (Cambridge Local Plan 2006, policies 8/1, 8/2, 8/3, 8/4 and 8/5).

33. Car Parking: On-Plot Research and Development

On-plot car parking provision for any biotech or biomedical research and development use shall be provided at a ratio of 1 space for every 80 square metres of gross floor area measured externally excluding plant areas or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of on-plot car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridge Local Plan 2006, policies 8/10, 9/3, 9/5 and 10/1).

34. Car Parking: Clinical, Higher Education or Sui Generis (Employee)

Car parking provision for employees of any clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses shall be provided at a ratio of 1 space for every 72 square metres of gross floor area measured externally excluding plant areas or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridge Local Plan 2006, policies 8/10 9/3, 9/5 and 10/1).

35. Car Parking: Clinical, Higher Education or Sui Generis (Patients and Visitors)

Car parking provision for patients and visitors for any clinical research and treatment (D1 and/or clinical in-patient treatment) or higher education or sui generis medical research institute uses shall be provided at a ratio of 1 space for every 773 square metres of gross floor area measured externally excluding plant areas or any such ratio agreed in writing with the Local Planning Authority that provides a lesser amount of car parking provision.

Reason: To ensure that the development takes place in accordance with the principles and parameters contained within the Environmental Statement, to ensure the predicted impacts of vehicular movements are not exceeded and to ensure the proposal encourages sustainable modes of transport to and from the site (Cambridge Local Plan 2006, policies 8/10 9/3, 9/5 and 10/1).

36. Car Parking: Disabled Spaces

Disabled car parking spaces shall constitute at least 5% of the total number of spaces provided.

Reason: To ensure that the development provides sufficient disabled parking (Cambridge Local Plan 2006, policy 8/10).

37. Cycle Parking: Calculation of Spaces Required

Unless otherwise agreed in writing by the Local Planning Authority, the submission of any reserved matters application for approval of any building shall include a quantum of cycle parking provision that is equivalent to:

a) For staff provision, a level which will provide a total number of spaces which cater for at least 10% more than the existing modal share percentage of staff cycling to work as shown by the latest Addenbrooke's Annual Travel Survey. The final level of provision to be calculated shall assume that only 80% of staff will be on-site at any one time.

b) For patients and visitors, a level which will provide a total number of spaces which cater for at least 10% more than the existing modal share percentage of patients and visitors cycling to work as shown by the latest Addenbrooke's Annual Travel Survey. The final level of provision to be calculated shall assume that cycle parking spaces are used 3 times daily.

Reason: To ensure that the proposed level of cycling provision is appropriate to the nature of the proposed building and its use (Cambridge Local Plan 2006, policy 8/6).

38. Site Wide Ecological Conservation Management Plan

Prior to or concurrently with the submission of the first of the reserved matters application for the site, a Site Wide Ecological Conservation Management Plan (SWEEMP) shall be submitted to the local planning authority for approval. The plan shall set out how the development will improve the net biodiversity of the site and shall accord with and give effect to the principles for such a Plan proposed in the Environmental Statement submitted with the application and include:

- a) Contractor responsibilities, procedures and requirements.
- b) Full details of appropriate habitat and species surveys (pre and post-construction), and reviews where necessary, to identify areas of importance to biodiversity.
- c) Full details of measures to ensure protection and suitable mitigation to all legally protected species and those habitats and species identified as being of importance to biodiversity both during construction and post-development, including consideration and avoidance of sensitive stages of species life cycles, such as the bird breeding season, protective fencing and phasing of works to ensure the provision of advanced habitat areas and minimise disturbance of existing features.
- d) Identification of habitats and species worthy of management and enhancement together with the setting of appropriate conservation objectives for the site. Prescriptions shall be provided to detail how habitat and species management and enhancement shall be provided alongside measures to provide habitat restoration and creation to deliver targets in the Cambridgeshire and UK Biodiversity Action Plans such as: the provision of bat and bird boxes on buildings and on trees around the site; the provision of other nesting features for bird species such as bird ledges; reptile hibernacula including small log and rubble piles; the creation of new aquatic habitats where possible within permanent areas of open water of minimum depth 0.5m; the provision of wetland margins and habitat islands; the management of grassland

- e) A summary work schedule table, confirming the relevant dates and/or periods that the prescriptions and protection measures shall be implemented or undertaken within.
- f) Monitoring/Environmental Audits carried out four times annually during the construction phase.
- g) Confirmation of suitably qualified personnel responsible for overseeing implementation of the SWEEMP commitments, such as an Ecological Clerk of Works, including a specification of role.
- h) Long-term maintenance, management and monitoring responsibilities for a period of 12 years to ensure an effective implementation of the SWEEMP ensuring periodic review of the objectives and prescriptions.

No development shall commence until such time as the SWEEMP has been approved in writing by the Local Planning Authority. All species and habitat protection, enhancement, restoration and creation measures shall be carried out in accordance with the approved SWEEMP.

Reason: To ensure that the development of the site conserves and enhances ecology (Cambridge Local Plan 2006, policies 4/3, 4/6, and 4/8).

39. ECMP Reserved Matters

Any reserved matters application shall include an ECMP Statement that demonstrates how it accords with the aims and objectives of the approved SWEEMP. It shall detail which specific ecological measures are proposed and the timing for their delivery. No development shall commence within the site for which reserved matters approval is being sought until such time as the ECMP Statement has been approved in writing by the Local Planning Authority. The ecological measures shall be carried out in accordance with the approved details and timing of delivery.

Reason: To ensure that the development of the site conserves and enhances ecology (Cambridge Local Plan 2006, policies 4/3, 4/6, and 4/8).

40. Archaeology

No development of an approved reserved matters parcel shall take place until the applicant, their agent, or successors in title, has secured the implementation of a programme of archaeological works in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority in respect of the approved reserved matters parcel. Development within areas identified for archaeological investigation in the approved written scheme shall not commence until the archaeological fieldwork in those areas has been completed in accordance with the approved written scheme of investigation. The written scheme of investigation will include a timetable for recording, publication and archiving and the final report will be submitted to the Local Planning Authority in accordance with these details.

Reason: To ensure the implementation of an appropriate archaeological investigation, recording, reporting and publication (Cambridge Local Plan 2006, policy 4/9).

41. Drainage Reserved Matters

Any reserved matters application shall include a detailed surface water drainage strategy, which must be in accordance with the Cambridge Biomedical Campus Phase 2 Flood Risk Assessment, pursuant to the reserved matters site for which approval is sought. The strategy shall include details of the design, location and capacity of such SuDS features and shall include ownership, long-term management/maintenance and monitoring arrangements/responsibilities, including detailed calculations to demonstrate the capacity of surface water management features without the risk of flooding to land or buildings. The strategy should also demonstrate that the exceedance of the designed system has been considered through the provision of overland flow routes. The development shall be carried out in accordance with the approved details and no building pursuant to the particular reserved matters for which approval is being sought shall be occupied or used until such time as the approved detailed surface water measures have been fully completed in accordance with the approved details.

Reason: To ensure a satisfactory method of surface water drainage in accordance with the National Planning Policy Framework (NPPF).

42. Drainage Maintenance

Details for the long term maintenance arrangements for any parts of the surface water drainage system which will not be adopted (including all SuDS features) shall be submitted to and approved in writing by the Local Planning Authority prior to the first occupation of any building that they serve. The submitted details should identify runoff sub-catchments, SuDS components, control structures, flow routes and outfalls. In addition, the plan must clarify the access that is required to each surface water management component for maintenance purposes. The maintenance plan shall be carried out in full thereafter.

Reason: To ensure the satisfactory maintenance of un-adopted drainage systems in accordance with the requirements of paragraphs 103 and 109 of the National Planning Policy Framework.

43. Bespoke Sustainability Strategy

All future reserved matters applications shall be carried out in accordance with the approved Turley Associates Bespoke Sustainability Strategy (January 2016 or any agreed revision thereof subject to condition 44). Each application will be accompanied by a Sustainability Statement demonstrating how the targets set out in the Bespoke Sustainability Strategy have been met, unless otherwise agreed in writing by the local planning authority.

Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2006, policy 8/16 and Supplementary Planning Document 'Sustainable Design & Construction' 2007).

44. Review of the Bespoke Sustainability Strategy

The Bespoke Sustainability Strategy and the targets therein, shall be reviewed every three years, where there have been updates to national policy or building regulations, for a period of nine years from the date of approval of the outline application. The revised strategy, or letter confirming there have been no updates to national policy or building regulations, shall be submitted to and approved in writing by the Local Planning Authority. Any reserved matters application shall be assessed against the approved Bespoke Sustainability Strategy at that time.

Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2006, policy 8/16 and Supplementary Planning Document 'Sustainable Design & Construction' 2007).

45. Fire Hydrants

Development (excluding below ground enabling works) shall not commence on any approved reserved matters parcel until a scheme for the provision and location of fire hydrants to serve that reserved matters parcel has been submitted to and approved in writing by the local planning authority. The provision and location of the fire hydrants shall be provided in accordance with the agreed details prior to the occupation of the approved reserved matters parcel.

Reason: To ensure the provision of adequate water supply infrastructure to protect the safe living and working environment for all users and visitors (Cambridge Local Plan 2006, policies 3/7, 3/12 and 8/18).

46. Foul Water Strategy

No development of an approved reserved matters parcel shall commence until a foul water strategy, which must be in accordance with the Cambridge Biomedical Campus Phase 2 Flood Risk Assessment, for that parcel has been submitted to and approved in writing by the local planning authority. No approved reserved matters building shall be occupied until the works have been carried out for that building in accordance with the approved foul water strategy.

Reason: To prevent environmental and amenity problems arising from flooding in accordance with the requirements of the National Planning Policy Framework and Cambridge Local Plan 2006, policy 8/18.

47. Detailed Waste Management and Minimisation Plan

Prior to the commencement of development of any reserved matters phase a Detailed Waste Management and Minimisation Plan (DWMMP) shall be submitted to and approved in writing by the local planning authority for that phase. The DWMMP shall include details of:

- a) Construction waste infrastructure including a construction material recycling facility to be in place during all phases of construction
- b) anticipated nature and volumes of waste and measures to ensure the maximisation of the reuse of waste.
- c) measures and protocols to ensure effective segregation of waste at source including waste sorting, storage, recovery and recycling facilities to ensure the maximisation of waste materials both for use within and outside the site.
- d) any other steps to ensure the minimisation of waste during construction
- e) the location and timing of provision of facilities pursuant to criteria a/b/c/d.
- f) proposed monitoring and timing of submission of monitoring reports.
- g) the proposed timing of submission of a Waste Management Closure Report to demonstrate the effective implementation, management and monitoring of construction waste during the construction lifetime of the development.

The DWMMP shall be implemented in accordance with the agreed details, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of maximising waste re-use and recycling opportunities; and to comply with policy CS28 of the Cambridgeshire and Peterborough Minerals and Waste Core Strategy (2011); and to comply with the National Planning Policy for Waste October 2014; and Guidance for Local Planning Authorities on Implementing Planning Requirements of the European Union Waste Framework Directive (2008/98/EC), Department for Communities and Local Government, December 2012.

48. Waste

Within any reserved matters application full details of the on-site storage facilities for trade waste, including waste for recycling and the arrangements for the disposal of waste shall be provided. The approved arrangements shall be retained thereafter unless alternative arrangements are agreed in writing by the local planning authority.

Reason: To protect the amenities of nearby residents/occupiers and in the interests of visual amenity in accordance with policies 4/13 and 6/10 of the Cambridge Local Plan 2006.

49. Landscape

Within any reserved matters application pursuant to this approval, the landscaping details required by condition 2 shall include detailed landscape designs and specifications for the associated reserved matters site. The landscape designs and specifications shall include the following:

Soft Landscaping

- a) Full details of planting plans and written specifications, including cultivation proposals for maintenance and management associated with plant and grass establishment, details of the mix, size, distribution, density and levels of all trees/hedges/shrubs to be planted and the proposed time of planting. The planting plan shall use botanic names to avoid misinterpretation. The plans should include a full schedule of plants.
- b) 1:200 plans (or at a scale otherwise agreed) with cross-sections of mounding, ponds, ditches and swales and proposed treatment of the edges and perimeters of the site.
- c) The landscape treatment of roads (primary, secondary, tertiary and green) through the development.
- d) A specification for the establishment of trees within hard landscaped areas including details of space standards (distances from buildings etc.) and tree pit details.
- e) The planting and establishment of structural landscaping to be provided in advance of all or specified parts of the site as appropriate.
- f) Full details of any proposed alterations to existing watercourses/drainage channels.
- g) Details and specification of proposed earth modelling, mounding, re-grading and/or embankment areas or changes of level across the site to be carried out including soil quantities, topsoil storage to BS 3882 : 2007, haul routes, proposed levels and contours to be formed, sections through construction to show make-up, and timing of works.
- h) Ecological mitigation and bio-diversity enhancement proposals.

Hard Landscaping

- i) Full details of all proposed methods of boundary treatment including details of all gates, fences, walls and other means of enclosure both within and around the edge of the site.
- j) Full details, including cross-sections, of all bridges and culverts.
- k) Utility routes, type and specification.
- l) The location and specification of minor artefacts and structures, including furniture, refuse or other storage units, signs and lighting columns/brackets.
- m) 1:200 plans (or at a scale otherwise agreed) including cross sections, of roads, paths and cycleways.
- n) Details of all hard surfacing materials (size, type and colour)

All hard landscaping shall be completed prior to the occupation/use of any part of the building(s) approved through the relevant reserved matters, unless otherwise agreed in writing by the local planning authority. All planting, seeding or turfing comprised in the approved details of soft landscaping, shall be carried out in the first planting and seeding seasons following the occupation of the buildings or completion of the development, whichever is the sooner, unless an alternative landscaping phasing plan is submitted to and approved in writing by the local planning authority.

Reason: In the interests of the amenity of future occupants and to ensure that a detailed approach to the development of the built-up area (or parcels thereof) is agreed to safeguard the setting and special character of Cambridge, the retained Green belt, surrounding open countryside and to ensure a suitable relationship and integration of the built development with its surroundings (Cambridge Local Plan 2006, policies 3/2, 3/4, 3/7, 3/11, 3/12, 4/3, 9/3 and 9/5).

INFORMATIVE: To satisfy the plant sound insulation condition, the rating level (in accordance with BS4142:2014) from all plant, equipment and vents etc (collectively) associated with this application should be less than or equal to the existing background level (L90) at the boundary of the premises subject to this application and having regard to noise sensitive premises.

Tonal/impulsive sound frequencies should be eliminated or at least considered in any assessment and should carry an additional correction in accordance with BS4142:2014. This is to prevent unreasonable disturbance to other premises. This requirement applies both during the day (0700 to 2300 hrs over any one hour period) and night time (2300 to 0700 hrs over any one 15 minute period).

It is recommended that the agent/applicant submits an acoustic prediction survey/report in accordance with the principles of BS4142:2014 "Methods for rating and assessing industrial and commercial sound" or similar, concerning the effects on amenity rather than likelihood for complaints. Noise levels shall be predicted at the boundary having regard to neighbouring premises.

It is important to note that a full BS4142:2014 assessment is not required, only certain aspects to be incorporated into an acoustic assessment as described within this informative.

Such a survey / report should include: a large scale plan of the site in relation to neighbouring premises; sound sources and measurement / prediction points marked on plan; a list of sound sources; details of proposed sound sources / type of plant such as: number, location, sound power levels, sound frequency spectrums, sound directionality of plant, sound levels from duct intake or discharge points; details of sound mitigation measures (attenuation details of any intended enclosures, silencers or barriers); description of full sound calculation procedures; sound levels at a representative sample of noise sensitive locations and hours of operation.

Any report shall include raw measurement data so that conclusions may be thoroughly evaluated and calculations checked.

INFORMATIVE: Dust condition informative

To satisfy the condition requiring the submission of a program of measures to control airborne dust above, the applicant should have regard to:

-Council's Supplementary Planning Document - "Sustainable Design and Construction 2007":

<http://www.cambridge.gov.uk/public/docs/sustainable-design-and-construction-spd.pdf>

-Guidance on the assessment of dust from demolition and construction

http://iaqm.co.uk/wp-content/uploads/guidance/iaqm_guidance_report_draft1.4.pdf

- Air Quality Monitoring in the Vicinity of Demolition and Construction Sites 2012

http://www.iaqm.co.uk/wp-content/uploads/guidance/monitoring_construction_sites_2012.pdf

-Control of dust and emissions during construction and demolition - supplementary planning guidance

https://www.london.gov.uk/sites/default/files/Dust%20and%20Emissions%20SPG%208%20July%202014_0.pdf

INFORMATIVE: To satisfy the backup generator condition the noise level from the generator associated with this application should not raise the existing background level (L90) by more than 5 dB(A) at the boundary of the premises subject to this application and having regard to noise sensitive premises.

Note: Only in exceptional circumstances where the applicant has shown that the above cannot be achieved and the need is for real emergencies (e.g. hospital operating theatre or emergency services) the following standard may be used

To satisfy the emergency generator condition the noise level from the emergency generator associated with this application should not raise the existing background level (L90) by more than 10 dB(A) at the boundary of the premises subject to this application and having regard to noise sensitive premises.

INFORMATIVE: New development can sometimes cause inconvenience, disturbance and disruption to local residents, businesses and passers-by. As a result the City Council runs a Considerate Contractor Scheme aimed at promoting high standards of care during construction. The City Council encourages the developer of the site, through its building contractor, to join the scheme and agree to comply with the model Code of Good Practice, in the interests of good neighbourliness. Information about the scheme can be obtained from The Considerate Contractor Project Officer in the Planning Department (Tel: 01223 457121).

INFORMATIVE: The site investigation, including relevant soil, soil gas, surface and groundwater sampling should be carried out by a suitably qualified and accredited consultant/contractor in accordance with a quality assured sampling, analysis methodology and relevant guidance. The Council has produced a guidance document to provide information to developers on how to deal with contaminated land. The document, 'Contaminated Land in Cambridge-Developers Guide' can be downloaded from the City Council website on <https://www.cambridge.gov.uk/land-pollution>.

Hard copies can also be provided upon request

INFORMATIVE: Approved remediation works shall be carried out in full on site under a quality assurance scheme to demonstrate compliance with the proposed methodology and best practice guidance.

INFORMATIVE: Any material imported into the site shall be tested for a full suite of contaminants including metals and petroleum hydrocarbons prior to importation. Material imported for landscaping should be tested at a frequency of 1 sample every 20m³ or one per lorry load, whichever is greater. Material imported for other purposes can be tested at a lower frequency (justification and prior approval for the adopted rate is required by the Local Authority). If the material originates from a clean source the developer should contact the Environmental Quality Growth Team for further advice.

INFORMATIVE: Electricity substations are known to emit electromagnetic fields. The Public Health England (PHE) Radiation Protection Service has set standards for the release of such fields in relation to the nearest premises. The applicant should contact The National Grid EMF unit on 0845 702 3270 for advice regarding the electric/magnetic fields that are associated with electric substations.

INFORMATIVE: A premises licence may be required for this development in addition to any planning permission. A premises licence under the Licensing Act 2003 may be required to authorise:

- The supply of alcohol
- Regulated entertainment e.g.
- Music (Including bands, DJ's and juke boxes)
- Dancing
- The performing of plays
- Boxing or wrestling
- The showing of films
- Late Night Refreshment (The supply of hot food or drink between 23:00-05:00)

A separate licence may be required for activities involving gambling including poker and gaming machines.

The applicant is advised to contact The Licensing Team of Environmental Health at Cambridge City Council on telephone number (01223) 457899 or email Licensing@cambridge.gov.uk for further information.

INFORMATIVE: As the premises is intended to be run as a food business the applicant is reminded that under the Food Safety Act 1990 (as amended) the premises will need to be registered with Cambridge City Council. In order to avoid additional costs it is recommended that the applicant ensure that the kitchen, food preparation and food storage areas comply with food hygiene legislation, before construction starts. Contact the Commercial Team at Cambridge City Council on telephone number (01223) 457890 for further information.

INFORMATIVE: Demolition/Construction noise/vibration report

The noise and vibration report should include:

- a) An assessment of the significance of the noise impact due to the demolition/construction works and suitable methods for this are to be found in BS 5228:2009 Part 1 Annex E - Significance of noise effects. It is recommended that the ABC method detailed in E.3.2 be used unless works are likely to continue longer than a month then the 2-5 dB (A) change method should be used.
- b) An assessment of the significance of the vibration impact due to the demolition/construction works and suitable methods for this are to be found in BS 5228:2009 Part 2 Annex B - Significance of vibration effects.

If piling is to be undertaken then full details of the proposed method to be used is required and this should be included in the noise and vibration reports detailed above.

Following the production of the above reports a monitoring protocol should be proposed for agreement with the Local Planning Authority. It will be expected that as a minimum spot checks to be undertaken on a regular basis at site boundaries nearest noise sensitive premises and longer term monitoring to be undertaken when:-

- Agreed target levels are likely to be exceeded
- Upon the receipt of substantiated complaints
- At the request of the Local Planning Authority / Environmental Health following any justified complaints.

Guidance on noise monitoring is given in BS 5228:2009 Part 1 Section 8.4 - Noise Control Targets and in Annex G - noise monitoring.

A procedure for seeking approval from the Local Planning Authority (LPA) in circumstances when demolition/construction works need to be carried out at time outside the permitted hours. This should incorporate a minimum notice period of 10 working days to the Local Planning Authority and 5 working days to neighbours to allow the Local Planning Authority to consider the application as necessary. For emergencies the Local Planning Authority should be notified but where this is not possible the Council's Out of Hours Noise service should be notified on 0300 303 3839.

Contact details for monitoring personnel, site manager including out of hours emergency telephone number should be provided.

INFORMATIVE: It is a requirement of the Clean Air Act 1993 that no relevant furnace shall be installed in a building or in any fixed boiler or industrial plant unless notice of the proposal to install it has been given to the local authority. Details of any furnaces, boilers or plant to be installed should be provided using the Chimney Height Calculation form (available here: <https://www.cambridge.gov.uk/chimney-height-approval>).

INFORMATIVE: Where chimney height calculations are required to be submitted, the relevant form is available on-line at: <https://www.cambridge.gov.uk/chimney-height-approval>.

INFORMATIVE: In drawing up the written scheme of archaeological investigation the timetable for the investigation should be included within the details of the agreed scheme. A brief for the archaeological works can be obtained from the County Archaeology office.

INFORMATIVE: As this is an ordinary watercourse, any proposals to alter the flow regime may require a prior written consent under the Land Drainage Act 1991 and must be discussed with the Flood and Water Team at Cambridgeshire County Council. The County also has a culverting policy and culverting of large sections of watercourse is prohibited. The watercourse must be made a feature of the development. Please contact the team on floodandwater@cambridgeshire.gov.uk or tel: 01223 706140.

INFORMATIVE: An application to discharge trade effluent must be made to Anglian Water and must have been obtained before any discharge of trade effluent can be made to the public sewer. Anglian Water recommends that petrol/oil interceptors be fitted in all car parking/washing/repair facilities. Failure to enforce the effective use of such facilities could result in pollution of the local watercourse and may constitute an offence.

INFORMATIVE: For the purposes of the Planning Conditions set out in this notice the reference to "Gross Floor Area" means the gross external floor space excluding areas for plant, interstitial plant floors, car parking structures and tunnels.

It is important the development is carried out fully in accordance with the approved plans. If you are an agent, please ensure that your client has a copy of them and that they are also passed to the contractor carrying out the development. A copy of the approved plan(s) is/are kept on the planning application file.

It is important that all conditions particularly pre-commencement conditions are fully complied with, and where appropriate, discharged prior to the implementation of the development. Failure to discharge such conditions may invalidate the planning permission granted. The development must be carried out fully in accordance with the requirements of any details approved by condition.

This decision notice does not convey any approval or consent which may be required under any enactment, bye-law, order or regulation other than Section 57 of the Town and Country Planning Act 1990.

Your attention is specifically drawn to the requirements of the Chronically Sick and Disabled Persons Act 1970, the Disabled Persons Act 1981, to the British Standards Institution Code of Practice for Access for the Disabled to Buildings (BS 5810 1979), to Part M of the Building Regulations 1991, and to BS 5588 Part 8 1988 (Code of Practice for means of escape for disabled persons). The development should comply with these requirements.

INFORMATIVE: Compliance with the Town and Country Planning Development Management Procedure Order 2010 (as amended) Part 4 Paragraph 31

In reaching this decision the City Council has worked in a positive and proactive manner with the applicant and sought to find solutions to problems arising in relation to dealing with the planning application. In general the Council will seek to approve applications for sustainable development and work proactively with applicants that will improve the economic, social and environmental conditions of the area. The Council provides a pre- application advice service, the details of which are set out on our website. When an application is received the Council will add such planning conditions as are necessary to allow the application to be approved or will provide detailed reasons for refusal where planning issues are not capable of resolution.

For further information please go to www.cambridge.gov.uk/planning.

Dated: 5 September 2017

SS Kelly

Director of Planning and Economic Development

SB

SEE NOTES ATTACHED

PLANNING PERMISSION

1. 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 permission subject to conditions, then you can appeal to the First Secretary of State under section 78 of the Town & Country Planning Act 1990.

If you want to appeal then you must do so within 6 months of the date of this notice or within 12 weeks of the date of the decision notice against a refusal of any householder or minor commercial planning application, using a form which you can get from the Planning Inspectorate at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN (Tel: 0303 444 5000) or from <https://acp.planninginspectorate.gov.uk/>. The Secretary of State can allow for 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 they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

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

2. 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 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 (District Council, London Borough Council or Common Council of the City of London) 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 & Country Planning Act 1990.

LISTED BUILDING CONSENT, CONSERVATION AREA CONSENT

3. Notification of Demolition

If listed building consent has been granted and any demolition is to take place, you must in accordance with Section 8(2)(b) of the Planning (Listed Building and Conservation Areas) Act 1990 complete a Final Notice of Demolition Form and send it to English Heritage at least one month before demolition occurs.

4. Appeals to the Secretary of State

If you are aggrieved by the decision of your local planning authority to refuse listed building or conservation area consent, or to grant either subject to conditions then you may appeal to the Secretary of State for the Environment in accordance with sections 20 and 21 of the Planning (Listed Building and Conservation Areas) Act 1990. Appeals must be made within 6 months of the date of the decision (see notes under 1 above).

5. Purchase Notice

If listed building or conservation area consent is refused, or if either is granted subject to conditions, and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he may serve on the District Council in which the land is situated a purchase notice requiring the council to purchase his interest in the land in accordance with section 32 of the Planning (Listed Building and Conservation Areas) Act 1990.

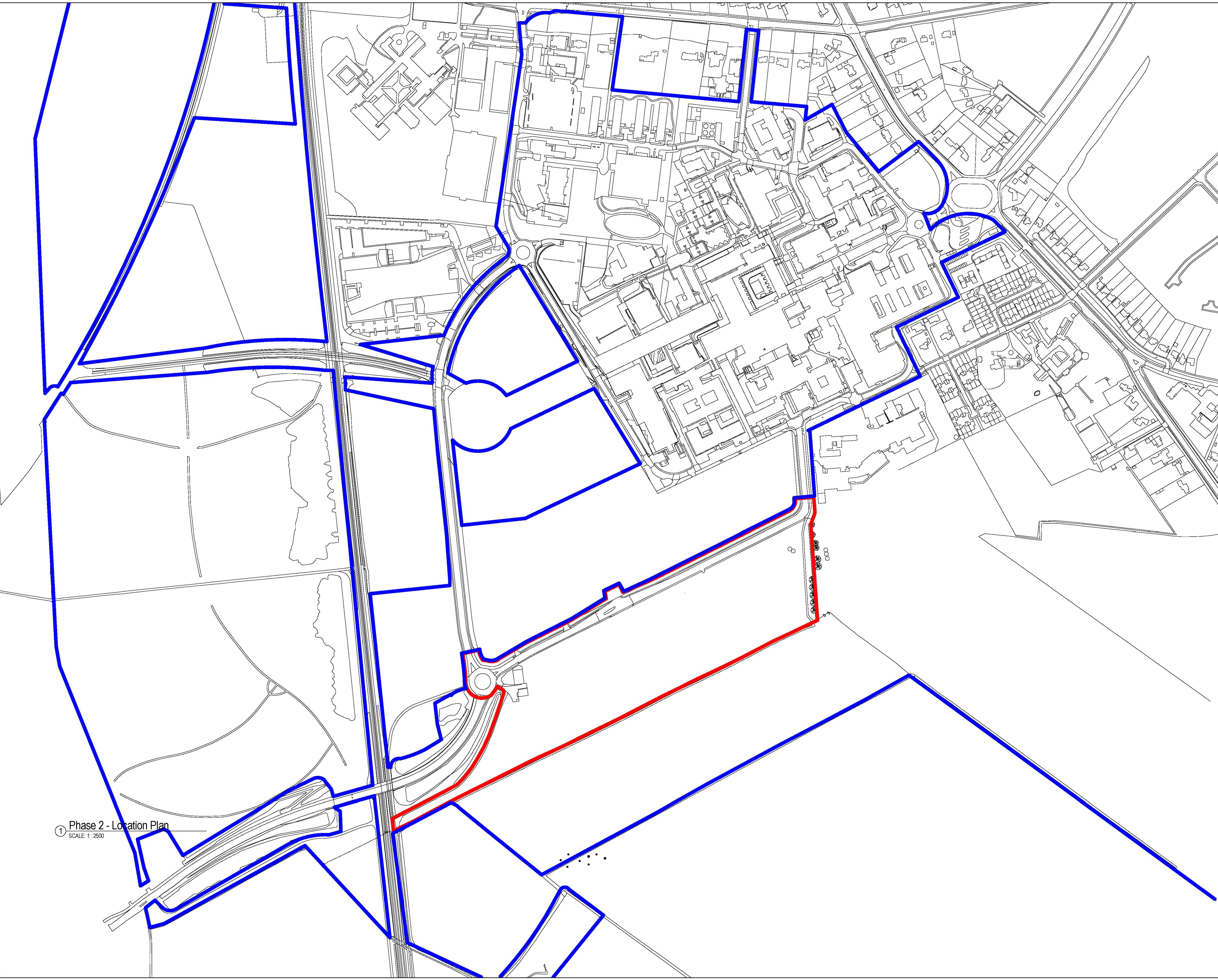
6. Compensation

In certain circumstances a claim may be made against the local planning authority for compensation as provided for under Section 27 of the Planning (Listed Building and Conservation Areas) Act 1990.

CONSENT TO DISPLAY AN ADVERTISEMENT

7. Appeals to the Secretary of State

If you are aggrieved by the decision of the local planning authority to refuse consent to display an advertisement, or to grant consent subject to conditions then you may appeal to the Secretary of State for the Environment under Regulation 15 of the Town and Country Planning (Control of Advertisements) Regulations 1992. Appeals must be made within 8 weeks of the date of the decision (see notes under 1 above)



① Phase 2 - Location Plan
SCALE: 1:2500

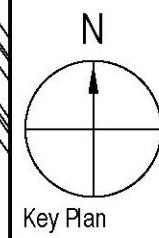


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- Notes:
1. All dimensions are in metres and levels are in metres unless otherwise noted
 2. Do not scale from this drawing
 3. All dimensions and levels are to be confirmed
 4. Any discrepancies or errors are to be reported to the consultant prior to commencement of work
 5. All drawings are to be read in conjunction with all other relevant drawings and specifications
 6. Any discrepancies between architectural, structural and services drawings shall be brought to the engineers notice prior to execution of any work on site
 7. The contractor shall be responsible for producing a complete set of detailed, co-ordinated shop drawings for consultants approval prior to execution of the works on site
 8. The copyright of this drawing belongs to NBBJ.

- Legend:
- Application Boundary
 - Ownership Boundary



Key Plan

Project Status:
P - Planning

Project Milestone Issue History:

Issue	Date	Description
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Drawing Status:

Drawing Revision History:

3	22.01.16	Issue for Information
2	22.01.16	Issue for Information
1	21.01.16	Issue for Information

Issue	Date	Description
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Project Name:
CBC PHASE 2

Project Number: 100797.00

Scale:	1 : 2500@A1	Issue Date:	22.01.16
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Drawn:	MT	Checked:	CC
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Drawing Name:
Location Plan

Drawing Number:	Issue:
MP-A(10)110	P 3

Appendix 6

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tel: 01244 893 130

London Office:
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tel: 0208 973 2428

Welsh Office:
Y Beudy, Buckholt,
Monmouth
Wales, NP25 5RD
tel: 01600 715 712

**CAMBRIDGE BIOMEDICAL CAMPUS
NATURE CONSERVATION MANAGEMENT PLAN**

CLIENT: COUNTRYSIDE PROPERTIES

OUR REF: COUPRO-BIOMED-2671-NCMP

SEPTEMBER 2010



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SITE DETAILS

SITE NAME:	Cambridge Biomedical Campus
CENTRAL GRID REFERENCE:	TI 460 549
LOCAL PLANNING AUTHORITY:	Cambridge City Council
AREA:	26ha
CONSERVATION STATUS:	The site is not covered by any conservation designations, but Red Cross Lane Drain City Wildlife Site forms part of the southern boundary. Additionally, Hobson's Brook City Wildlife Site lies to the west of the site and is included in this plan

INTRODUCTION

- I. This site wide Nature Conservation Management Plan (NCMP) has been prepared by ecosulis ltd in March 2010 and updated following consultation in September 2010 on behalf of Countryside Properties and will be applied to the site of the Cambridge Biomedical Campus, Cambridge. This Plan addresses Condition 15 of outline planning permission for the site, which states:

‘Prior to the commencement of development a site wide Nature Conservation Management Plan shall be submitted to and approved in writing by the local planning authority. The Plan shall accord with and give effect to the principles for such a Plan proposed in the Environmental Statement submitted with the application.

As a matter of principle, the Plan shall set out an objective of enhancing the net biodiversity of the site as a result of development and shall include:

- a) Long-term maintenance, management and monitoring responsibilities for a period of 12 years
- b) The appointment of an Ecological Clerk of Works
- c) Contractor responsibilities, procedures and requirements
- d) Monitoring/Environmental Audits carried out four times annually during the construction phase, which shall include a further survey of fauna within Hobson’s Brook
- e) Consideration and avoidance of sensitive stages of species life cycles, such as the bird breeding season, protective fencing and phasing of works to ensure the provision of advanced habitat areas and minimise disturbance of existing features
- f) Specific provision of measures to promote Biodiversity and Biodiversity Action Plan targets including: The provision of bat and bird boxes on buildings and on trees around the site; the provision of other nesting features for bird species such as bird ledges; reptile hibernacula including small log and rubble piles; the creation of new aquatic habitats where possible with permanent areas of open water of minimum depth 0.5m; the provision of wetland margins and habitat islands; and the management of grassland

The plan should set out the timing of provision in relation to the phasing of development on the site’.

2. The Plan has been prepared following ecological surveys and consultation and is in accordance with the following: Planning Policy Statement 9 for Biodiversity and Geological Conservation (PPS9); Regional Planning Guidance for East Anglia (RPG6);

Cambridgeshire and Peterborough Structure Plan 2003; Cambridge Local Plan: Adopted by Cambridge City Council 2006; Cambridgeshire Biodiversity Action Plan (LBAP); South Cambridgeshire District Council Biodiversity Strategy 'a vision for the conservation of the District's biodiversity 2006-2009', adopted by the Council in 2006; and Cambridge Sustainable Drainage Design and Adoption Guide (Cambridge City Council 2009).

3. This NCMP provides a scheme of capital and annual management works for the retained and created ecological features on site, namely grassland habitats, hedgerows, woodland/plantation and tree belts, and water bodies. A plan of the area to which management applies, referred to as the 'management site', is shown in Figure 1. A summary plan showing the location of the component habitats is provided in Figure 3 and a copy of the landscape plans (David Jarvis Associates, Dwg ref: 177/C50, 2007-2009), which shows further details on the location of these habitats is provided in Appendix II. Also included in this Plan is Hobson's Brook, a key landscape feature, which lies to the west of the management site.
4. The NCMP provides all necessary scientific information, prescriptions and programmes relating to the agreed conservation, enhancement, management and monitoring of habitats and biodiversity. The Plan aims to safeguard the existing ecological value of the site and to maintain the ecological benefits that will have been achieved.
5. Ecological surveys were undertaken by ecosulis Ltd between 2002 and 2006 and reported as part of the Environmental Statement accompanying the planning application. A summary of the surveys, results and assessment is provided in Table 1 below.

Table 1. Ecological Baseline Information for the Management Site

Survey	Results	Assessment (based on a range between Negligible and International value (IEEM 2006))
Extended Phase 1 Habitat Survey	Arable: Dominant habitat, heavily managed	Site Value
	Hedgerows: Low number, species-poor and heavily managed	Site Value
	Water bodies: Periodically dry, heavily managed ditches	District Value

Survey	Results	Assessment (based on a range between Negligible and International value (IEEM 2006))
	Includes Red Cross Lane Drain City Wildlife Site (CityWS) Includes Hobson's Brook CityWS off site to the west	
	Tree belts: Mature tree belts form two of the boundaries of the site (north and east)	Local value
Badger surveys	No evidence of badgers Setts known within the surrounding land, including Clay Farm to the west. Management site likely to be used by commuting and foraging badger	Local value
Bat surveys	Four common species of bats using the site for commuting and foraging (roost sites unknown, but limited suitable habitat present)	Local value
Water vole and otter survey	Unsuitable habitats on site, but Hobson's Brook (off site) has records of low numbers of water vole and the ditches on site are connected to the brook. Otter recorded along Hobson's Brook in 2009 (Cambridge City Council pers comm.)	Local value
Breeding bird surveys	Six red list species of farmland bird as well as green and amber list species	Local to District value
Winter bird surveys	Provides component of winter habitat for large flocks of lapwing and golden plover	County value
Reptile survey	Low populations of grass snake and common lizard recorded off site along	Local value

Survey	Results	Assessment (based on a range between Negligible and International value (IEEM 2006))
	Hobson's Brook	
Great crested newt survey	No great crested newts recorded on site or in the vicinity	N/A
Aquatic Invertebrate surveys	Moderate diversity of invertebrates recorded in the off site Hobson's Brook	Local value

Nomenclature

- The common name only of flora and fauna species is given in the main text of this Plan. A full species list with Latin names is given in Appendix I. All plant names follow the nomenclature of Stace (1997).

AIMS AND OBJECTIVES OF THE NATURE CONSERVATION MANAGEMENT PLAN**Aims**

7. The principal aim of the NCMP is to secure the adoption of a coherent, strategic and integrated approach to management and maintenance, which protects and enhances nature conservation interests within the management site, taking into account the following:
- Relevant Broad LBAP Habitat Action Plans including: Broad-leaved, mixed and yew woodland; built up areas and gardens; rivers and streams; and standing open water and canals. Relevant Local LBAP Habitat Action Plans including: Drainage ditches; parks, shelter belts and open spaces; and ponds. Relevant Priority LBAP Habitat Action Plans including: Ancient and/or species rich hedgerows; chalk rivers; lowland meadows; and lowland calcareous grassland
 - Cambridge City Local Plan 2006, which includes a number of policies relating to nature conservation and biodiversity (for details reference must be made to the policies themselves) including:
 - *4/6 Protection of Sites of Local Nature Conservation Importance*
 - *4/7 Species protection*
 - *4/8 Local Biodiversity Action Plans*
 - *4/14 Pollution and amenity*
 - South Cambridgeshire District Council Local Development Framework, which includes a number of policies relating to nature conservation and biodiversity (for full details reference must be made to the policies themselves) including:
 - *Policy NE/5 Countryside Enhancement Areas* – any development which would materially affect a Countryside Enhancement Area will be expected to mitigate its impact, or enhance the area, as part of the planning proposal

Hobson's Brook falls within the South Cambridgeshire District Council Biodiversity Strategy Countryside Enhancement Area and Wildlife Corridor

Objectives

8. The objectives of the NCMP have taken the LBAP objectives for the relevant Broad, Local and Priority Habitat Action Plans and planning policies into consideration and are as follows:
- To retain, enhance and ensure establishment of hedgerows, tree belts, and water bodies, and to ensure the establishment of new woodland/plantation and grassland
 - To ensure provision within new and existing habitats for wildlife
 - To protect identified habitat elements of the management site during construction
 - To ensure long-term management of retained and created habitats to maintain quality and offer suitable habitat for wildlife
 - To maximise the longevity and quality of vegetation retained/created on the management site
 - To protect and enhance the nature conservation value of existing and new habitats on the management site and, where appropriate, within the locality generally
 - To fulfil all the legal requirements in relation to the protection, management and enhancement of the ecological features of the management site, in particular, those that relate to nature conservation
 - To ensure provision for target species/groups, including water vole and otter, bats, birds, reptiles, invertebrates and local flora
 - To contribute to LBAP targets and strategies, by increasing net biodiversity on the management site
 - To provide a mechanism for monitoring and reviewing the NCMP and the operations contained therein

DESCRIPTION OF MANAGEMENT SITE AND HABITAT COMPONENTS**Management Site**

9. The management site lies to the east of the district of Trumpington, Cambridge and comprises around 26ha. Currently, the management site consists of large arable field units, bordered by species-poor hedgerows, woodland/plantation and tree belts and ditches associated with some of the hedgerows. Red Cross Lane Drain CityWS forms part of the boundary (shown in Figure 2, along with other designated sites within the wider area).
10. The management site is bounded by the main London-Cambridge active railway line to the west with the open arable fields of Clay Farm beyond. White Hill Farm lies to the south, the grounds of Addenbrooke's Hospital to the east and Long Road Sixth Form College to the north.
11. Beyond these immediate boundaries lies residential housing to the north and farmland to the south. Nine Wells Springs Local Nature Reserve (LNR; the source of Hobson's Brook) lies to the south and beyond the active railway line to the west lies Hobson's Brook.

Habitat Components

12. For the purposes of the NCMP the management site will be considered as comprising five separate but interlinked components (shown on Figure 3) and further detail on the location and extent of these habitats are shown on the landscape plans produced by David Jarvis Associates (Dwg ref: 1777/C50, 2007-2009) and a copy provided in Appendix II. These are as follows:
 - Grassland
 - Hedgerows
 - Woodland/Plantation and Tree Belts
 - Water Bodies and Associated Features
 - New Species Specific Enhancements

Grassland

13. Relevant Priority LBAP Habitat Action Plans include lowland meadows and lowland calcareous grassland. Calcareous grasslands in Cambridgeshire support a very rich flora including many nationally rare and scarce species, such as perennial flax, which has a Species Action Plan within the LBAP, and a diverse associated invertebrate fauna. Lowland grassland features prominently throughout the SSSI series in Cambridgeshire and CWS's cover nearly all remaining unimproved calcareous grassland in the county.

The County Structure Plan and district Local Plans include priorities to protect grassland.

Existing Habitats

14. Red Cross Lane Drain CityWS supports a diverse array of flora and is noted for its grassland habitat. The drain occurs on the south-west periphery of the management site. Amongst the dominant intensively managed surroundings, it offers some habitat and structural diversity and connectivity for wildlife.
15. No other grassland habitats currently exist within the management site.

New Habitats

16. Sowing and patch planting of wildflower and amenity grassland will occur both within the understorey and on the periphery of woodland, tree belts and hedges.
17. New grassland will be created within the management site in association with the areas of public open space (for example, Area 4, Figure 3). Amenity grassland will be established adjacent to footways and roads and will be patch planted with a variety of native bulbs. Although these grass areas will generally be subject to an intensive cutting regime relative to other areas of the management site so that these areas can be used for recreation, in places the height of the sward can be varied for aesthetic and nature conservation benefits.

Hedgerows

18. Ancient and/or species rich hedgerows are a Priority LBAP Habitat Action Plan. Many hedgerows in Cambridgeshire are not ancient or species rich. The management site has no ancient or species-rich hedgerows as defined by the LBAP, or important hedgerows as defined by the Hedgerow Regulations (1997). Ancient or species-rich hedgerows tend to be those which support the greatest diversity of plants and animals.

Existing Habitats

19. Hedgerows form a low proportion of the field boundaries within the site. The majority of these hedgerows are species-poor, being dominated by hawthorn with occasional standard trees.

New Habitats

20. New hedgerows will be established within the management site, for example, to define the edge of the avenue (Area 7, Figure 3 and further details is shown on the landscape plan produced by David Jarvis Associates (Dwg ref: 1777/C50/002U (2007), 1777/C50/004R (2007), 1777/C50/007J (2008), Appendix II). The planting of new hedgerows will include a beech hedge adjacent to the Boulevard. This is an ornamental

hedge and will compliment other shrub, tree and woodland planting and provide habitat connectivity through the site. Hedgerows provide shelter and a foraging resource to a wide range of animals including birds, amphibians, reptiles and invertebrates and provide connectivity to similar habitats in the surrounding area.

Woodland/Plantation and Tree Belts

21. Woodlands are found throughout Cambridgeshire, their nature and extent varying according to soil type and the influence of past and present management. Woodlands are a highly valued feature of the landscape for biodiversity and as an important recreational and educational resource. Woodlands provide habitat for a range of local wildlife, such as breeding and foraging birds, roosting and foraging bats and invertebrates. The roots of trees overhanging watercourses and lakes can provide shelter for a range of aquatic fauna, such as invertebrates, fish and water vole.
22. Woodlands can be included under national and international designations as Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) and local designations, such as CWS/CityWS. Woodlands are included under a number of local and national strategies/policies:
 - Working with the Grain of Nature: A Biodiversity Strategy for England (Defra, 2002)
 - The England Forestry Strategy
 - 'Woodland for Life' Regional Woodland Strategy for the East of England
 - National Planning Policy Statement 9 (PPS9) and regional policy
23. Trees are distinctive landscape features, which provide an important ecological resource for a range of local wildlife. Mature trees can contain significant amounts of deadwood, which provides suitable habitat for invertebrates and fungi. Trees offer nesting sites for birds and can include features such as splits, cavities and ivy providing suitable roosting sites for bats, which feed on the invertebrates that the trees support.

Existing Habitats

24. Tall screening broad-leaved trees divide the site from the Sixth Form College to the north and also along part of the eastern boundary adjacent to the existing Addenbrooke's Hospital complex.

New Habitats

25. Native planting of local origin will occur across the site in the form of woodland/shrub blocks in the southern part of the site and tree belts, incorporating understorey and edge planting, hedgerows and shrub planting to create a mosaic of habitats and provide

structural diversity, food resources and green corridors (David Jarvis Associates, Dwg ref: 1777/C50/007J) (2008), Appendix II).

26. Adjacent to avenues, planting will have ornamental and wildlife value and consist of alder, downy birch, ash, hornbeam and pedunculate oak with mixed understorey planting of field maple, wild cherry, hazel, spindle, dogwood, blackthorn and guelder-rose. There will be additional hedge and ground cover planting below the understorey planting.
27. The new woodland and tree belts around the boundary of the management site will be important for screening, for integrating the management site with adjacent areas and also for contributing to nature conservation enhancement. The potential ecological benefits include the buffering of existing woodland areas on and adjacent to the management site, the development of new habitat areas and the linkage of existing and new woodland areas.

Water Bodies and Associated Features

28. Relevant Broad LBAP Habitat Action Plans include rivers and streams and standing open water and canals. Relevant Local LBAP Habitat Action Plans include drainage ditches and ponds. Relevant Priority LBAP Habitat Action Plans include chalk rivers.
29. Streams are very important for wildlife and in the UK support some of our most threatened animals, such as water vole, kingfisher, white-clawed crayfish and otter, and flora, such as water-crowfoot species, as well as a diversity of aquatic macrophytes. Chalk streams are vulnerable to a variety of threats including excessive water abstraction, physical modification, pollution and unsympathetic management. No chalk streams occur on the management site, but Hobson's Brook (chalk stream) lies to the west of the site, which is included within this NCMP.
30. Ditches and associated bankside vegetation can offer value to ground nesting birds such as corn bunting, reed bunting and yellow wagtail, which have been recorded on site.

Existing Habitats

31. The site is crossed by several periodically water-filled ditches that feed into Hobson's Brook. These ditches are managed, but some scrub/tall herbs are encroaching in places. The majority of the ditches are periodically dry. Other ditches form the boundaries of the management site including the Red Cross Lane Drain CityWS. This ditch has supported a diverse array of flora and fauna in the past, including water vole, according to the notification description.

32. Hobson's Brook is designated a CityWS as a notable chalk brook and is highlighted in the Cambridge Local Plan as an important wildlife corridor. It is also a designated urban green space. Much of this watercourse lies approximately 300m from the central section of the site, but the western tip of the site abuts a small stretch of the brook.
33. Based on recent findings (local Wildlife Trust, 2006) along Hobson's Brook to the west of the site, there is a low population of water vole present in the vicinity. No signs of water vole have been recorded on the management site, which offers generally unsuitable habitat for their permanent presence; however, due to the connectivity of the on site ditches with Hobson's Brook, it is assumed that water voles are transient visitors to the site. Otter has been recorded along Hobson's Brook (2009) and for the reasons mentioned above for water voles, otter is considered to be a transient visitor to the site.

New Habitats

34. The creation of three new areas of water in the form of seasonally wet ponds and ditches/swales (Sustainable Drainage Systems (SUDS)) throughout the management site, will replace existing habitat to be lost (Areas 3, 5 and 7, Figure 3 and further details is shown on the landscape plan produced by David Jarvis Associates (Dwg ref: 1777/C50/007J (2008), 1777/C50/002U (2007), 1777/C50/004R (2007), 1777/C50/003N (2007)Appendix II) and add to the current aquatic habitat on site. Primarily these will function to maintain the hydrological status of the area and prevent pollution from entering groundwater flow. However, they offer opportunities for wildlife habitat creation and this will be maximised within the design (refer to Appendix III for the idealised design code for new water bodies). Where possible, water bodies will feature the following:
- Extended detention basins of varying depth that affords shallow temporary storage for surface and swale run off
 - Wetland margins
 - Submerged/emergent aquatic vegetation
 - Habitat islands
 - Seasonally dry areas
35. The design of the water bodies will contribute towards promoting the proliferation of the more sensitive species recorded in the area, including water vole and aquatic invertebrates, with the aim of extending their range, boosting numbers and subsequent population stability to buffer the effects of elevated levels of disturbance associated with the change in land use of the management site.

New Species Specific Enhancements

36. Across the management site enhancements will be provided to boost existing species populations and attract species not currently known to occur on site.
37. The provision of roost sites and nesting opportunities will be provided within new builds, the woodland planting and the existing wooded areas in the form of bat bricks, integral bird nesting features, and bat boxes and bird boxes (refer to Appendix IV for examples of the designs to be used). Target species include song thrush and pipistrelle bat, both of which are Cambridgeshire BAP Species, and swifts and house martins.
38. Reptile/amphibian hibernacula will be provided across the management site within the woodland and tree belts. Additional new aquatic habitat will also provide specific enhancements for water voles (LBAP species), aquatic plants and reptiles, namely grass snake.

MANAGEMENT PRESCRIPTIONS

39. The management objectives are delivered through habitat categories. For each habitat category, management practices are defined and ongoing management requirements identified for a period of 12 years (the term of this Plan). The categories for existing and new habitats are given below (refer to Figures 1 and 2 (existing) and Figure 3 (new) for locations, respectively and further details is shown on the landscape plan produced by David Jarvis Associates (Appendix II).
40. All species lists for water bodies are provided with reference to Cambridgeshire County Council's *SUDS Draft Design Guide – Biodiversity*. These species lists should be used as a guide only. Further reference should be made to the Cambridge Sustainable Drainage Design and Adoption Guide (Cambridge City Council 2009).

GrasslandManagement Objectives

41. The management objectives for grassland within the management site are as follows:
- To provide areas for recreation
 - To ensure visual attractiveness
 - To control undesirable herbaceous species
 - To prevent the encroachment of woodland and scrub into the grasslands
 - To maximise the diversity of the grassland flora and value for associated fauna
 - To instigate long-term management, including suitable cutting regimes and an organic approach

Capital Works

42. Patches of wildflower grassland will be created across the site. This will comprise smaller areas of higher quality habitat than is currently provided by the dominant arable habitat on site. New grassland will provide species and structural diversity above that currently present and offer habitat and feeding opportunities for local wildlife, such as invertebrates, foraging mammals, reptiles and amphibians. This will consist of wet and calcareous grasslands, and amenity grassland:
43. The *wet grassland* will contain an 80% mix of sheep's-fescue, hard fescue, chewing's fescue, brown bent, creeping bent, crested dog's-tail and rough meadow-grass with a 20% wildflower mix of water-plantain, wild angelica, common knapweed, wild teasel, viper's-bugloss, hemp-agrimony, meadowsweet, water avens, frogbit, autumn hawkbit, rough hawkbit, oxeye daisy, greater bird's-foot-trefoil, ragged-robin, purple loosestrife,

selfheal, meadow buttercup, wild marjoram, red campion, white campion and red clover, sown at 35 g/m².

44. The *calcareous grassland* will contain an 80% mix of sheep's-fescue, hard fescue, chewing's fescue, and brown bent with a 20% mix of yarrow, kidney vetch, common knapweed, wild basil, wild carrot, lady's bedstraw, field scabious, rough hawkbit, oxeye daisy, common birds-foot-trefoil, black medick, hoary plantain, cowslip, selfheal, and small scabious, sown at 35 g/m².
45. The *amenity grassland* will be sown with DLF PRO070 multi-purpose amenity mix, sown at 35 g/m², and will be patch planted with a variety of native bulbs including snowdrop and grape-hyacinth.

Timing of Capital Works

46. New grassland habitats will be created in autumn (September/early October, where possible) following each phase of construction to avoid damage to these new features to ensure the highest chances of success. Existing grassland habitats will be protected during the construction works with appropriate protective fencing.

Annual Works

General Management Techniques

47. To protect vegetation and associated fauna, the use of weed killer and other chemicals will be kept to a minimum. Spot removal of weeds and invasive species will be carried out by hand where removal is necessary.
48. Within suitable areas of amenity grassland, for example, adjacent to hedgerows and woodland/plantation and tree belts, longer edge zones will be left, where possible, to create varied height and structure to the grass sward.
49. All cuttings will be removed from the grassland areas to prevent smothering of wildflower seedlings and to prevent nutrient build up, which can encourage competitive species. Where possible cuttings will be used to create grass piles elsewhere on site, such as within the buffers adjacent to the hedgerows and woodland/plantation and tree belts, to offer potential nesting sites for grass snake (and habitat for other wildlife).

Remedial Works

50. Following establishment, grassland may require periodic supplementary sowing. This will be undertaken using the same wet and calcareous species mixes as used during initial sowings.

51. Should herbicide be required for the establishment of new grassland, then these will be restricted to a glyphosate approved by Natural England and the Environment Agency as suitable for use near water bodies. Guidelines for the use of herbicides on weeds in or near to water bodies will be followed (refer to PB2289; MAFF, 1995).

Timing of Management

52. The newly created wildflower grasslands will be cut annually in September and a second cut in spring (April) may be required to maintain species richness. The necessity of the second cut would be informed by annual monitoring.
53. Amenity grassland will be cut regularly as required to maintain a close cropped sward. Longer edge zones will be cut annually in September.

Monitoring

54. During the construction phase, inspection of grassland habitats, including grassland associated with the Red Cross Lane Drain, will be undertaken four times annually to assess effects of construction and to inform reactive management.
55. Annual monitoring of grassland habitats and assessment of diversity will continue for the term of the Plan (12 years). This will be undertaken in June/July prior to cutting and when the majority of grasses and forbs are flowering.

Hedgerows

Management Objectives

56. The management objectives for hedgerows within the management site are as follows:
- To retain and protect hedgerows and trees within 5 and 10m wide buffers in compliance with BS5837: 2005
 - To augment any hedgerow gaps
 - To maintain continuity for avian species, including bats
 - To maintain continuity for other species
 - To traditionally manage the hedgerows to develop their structure and integrity
 - To develop the wildlife habitat value of the hedgerows
 - To maintain the wildlife value in the mature trees
 - To ensure that the retained trees are in a safe and healthy condition

Capital Works

57. Prior to any construction works protective fencing will be erected around all hedgerows and associated buffers on the management site in accordance with BS5837:

2005 Trees in Relation to Construction. Signs will inform construction workers of these protected no-go areas. All site storage and compounds will be located at a minimum distance of 30m from the protective fencing.

58. Existing species-poor hedgerows will be augmented to maximise their ecological value and to provide enhanced habitat for bird, bat and invertebrate communities.
59. Planting will use species characteristic of the local area and amenity species. Understorey planting of the amenity tree belts with hedgerows will contain the following species: field maple, wild cherry, hazel, spindle, dogwood, blackthorn and guelder-rose. These hedgerows will be planted in triple staggered rows, 250mm apart, with plants between 0.45 and 0.6m in height. All hedgerow plants will be fitted with transparent spiral guards and biodegradable mulch mats and mulched to a minimum depth of 75mm.

Timing of Capital Works

60. Protective fencing will be erected around all retained hedgerows prior to any works commencing on site and incorporating appropriate buffers, where required. Where possible, augmentation planting will be undertaken prior to or in the early stages of the construction phase, however, this will only occur where there is no risk of damage to new planting from indirect effects, such as dust pollution.
61. All planting will be undertaken at the appropriate time of year (November to February) to maximise success of establishment.

Annual Works

General Management Techniques

62. Where practicable, traditional methods of management such as hedge-laying, hand-trimming and coppicing, will be implemented.
63. General hedgerow management practices will aim to benefit hedgerow biodiversity. This will be achieved by using some, and where appropriate, all of the following techniques (adapted from English Nature, 2002):
 - Hedgerows will be trimmed at three yearly intervals at most and maintained at a height of at least 3m, except where road safety and access precludes it. Other exceptions are to the hedgerows under the tree belts and beech hedge adjacent to the Boulevard, which should be maintained to a height of 1.2m and trimmed annually (as required)
 - Hedgerows will be cut on a rotational basis so that some heavily fruiting structures are always present. Where possible, only a small proportion of the

total length of a hedge will be managed at any one time

- A proportion of the hedgerows throughout the management site will be left to grow for at least seven to ten years
- Coppicing and hedge-laying will be used to manage hedgerows that become gappy or lack dense branches at their base
- If the size of a hedgerow needs to be restricted, one side will be cut, leaving the other side and the top of the hedgerow uncut
- Flails will be avoided as a cutting technique where possible. Reciprocating bar cutters will be used where there are larger sections of hedgerows, which need to be cut, such as along roadsides
- Hedges will be trimmed to 'A shaped' or 'topped A shaped', which improves hedge viability and potential for wildlife
- Hedgerow management will take place at the appropriate time of year in order to take into account the varying interests of wildlife

64. Lengthening the time between hedge cutting can enhance the foraging resource by increasing the production of hard and soft mast. The first growth of a hedge should be laid and then allowed to grow freely so that flowers and fruit are produced and not removed by trimming.
65. Traditional management techniques will act to create a gradual transition from hedgerow to grassland, creating width and varied structure, which provides a greater availability of habitats, food and refuge.
66. The use of chemicals near to hedgerows and adjacent areas of vegetation will be avoided where possible to prevent loss of species richness of the hedgerows.

Remedial Works

67. During remedial works, consideration will be given to maintaining standing and ground based deadwood. Arisings from management will be used to create log piles in sites to suit reptiles and a wide range of invertebrates and lower plants.
68. Should herbicide be required for the establishment of new planting, then these will be restricted to a glyphosate approved by Natural England and the Environment Agency as suitable for use near water bodies. Guidelines for the use of herbicides on weeds in or near to water bodies will be followed (refer to PB2289; MAFF, 1995).

Timing of Management

69. Hedge management will be carried out outside of the bird breeding season, which is March to August inclusive. Where essential works occur within that timeframe, an Ecological Clerk of Works will carry out a check of vegetation to ensure no nesting birds are present or would be disturbed by works.

Monitoring

70. During the construction phase, inspection of hedgerows will be undertaken four times annually to assess effects of construction and to inform reactive management.
71. Annual monitoring of hedgerows will continue for the term of the Plan (12 years) and will be undertaken in April/May when woodland ground flora is visible.

Woodlands/Plantation and Tree Belts

Management Objectives

72. The management objectives for woodlands, plantation and tree belts within the management site are as follows:
- To protect and enhance existing tree and woodland habitat on the management site
 - To maintain the screening value of the woodlands/tree belts and their contribution to the structure of the management site
 - To protect and enhance the habitat value of the woodlands, plantation and tree belts
 - To promote deadwood habitat
 - To ensure satisfactory establishment and development of the new trees
 - To ensure the safe and healthy survival of planted trees by the implementation of sound arboricultural management and maintenance in accordance with Health and Safety and Operational Requirements
 - To ensure that the choice of new species enhances the wildlife value of the management site and is consistent with the surrounding habitats

Capital Works

73. Prior to any construction works protective fencing will be erected around all woodland, trees and associated buffers on the management site in accordance with BS5837: 2005 Trees in Relation to Construction. Signs will inform construction workers of these protected no-go areas. All site storage and compounds will be located at a minimum distance of 30m from protective fencing.

74. Native planting of local origin will occur across the site, in the form of woodland/shrub blocks and tree belts, incorporating understorey and edge planting, hedgerows and shrub planting to create a mosaic of habitats and provide structural diversity.
75. The woodland and tree belt planting will comprise standard trees, feathered trees, forest transplants and whips and shrubs, introduced into areas of ameliorated topsoil, using topsoil arising from the excavations on the management site. Best practice horticultural techniques will be used in the planting of these trees and shrubs. When appropriate mulch mats or gravel will be used around the trees and shrubs to maintain a weed free area around each plant within these new woodland areas and tree belts. Only where essential will chemicals be used to suppress weed growth, which will be a Natural England approved glyphosate-based product.
76. The woodland planting contains alder, downy birch, ash, hornbeam and pedunculate oak with mixed understorey planting of field maple, wild cherry, hazel, spindle, dogwood, blackthorn and guelder-rose. The scattered 3m spacing of small groups (3 to 5) of the same species will eventually provide a natural looking stand. The planting surrounding any woodland planting will consist of a scrub layer of hazel, blackthorn, dog-rose, guelder-rose and wayfaring-tree. Both the woodland and understorey planting will be 0.6 to 0.9m high.
77. The tree belts will consist of alder, downy birch, ash, hornbeam and pedunculate oak 3 to 4.25m high. The understorey planting in the tree belts will consist of field maple, wild cherry, hazel, spindle, dogwood, blackthorn and guelder-rose in 2m by 3m grids in groups of three to five of the same species that are 0.6 to 0.9m high. Mulching will be to a minimum depth of 75 mm.
78. Where the tree belts are in close proximity to ditches/swales or ponds, 2.5m to 3m high alder, downy birch, and ash standards will be planted with varying spacing of 2.5m to 4m in groups of ten to 20. In addition to the standard trees, feathered trees 1.75m to 2.50m high of downy birch and aspen with 2m spacing in groups of ten to 20. Understorey planting will consist of field maple, dogwood, hazel, blackthorn, guelder-rose, grey willow and goat willow from 0.4m to 0.8m high with 0.5m to 2m spacing in groups of 25 to 75. The various sizes of trees and shrubs in proximity to water bodies will be distributed evenly.
79. The following work will be undertaken during the first three years after planting to ensure the satisfactory establishment and development of the trees and shrubs:
- Maintenance of adequate levels of soil moisture
 - Maintenance of good levels of soil fertility

- Provision of rabbit guards, stakes and ties as necessary
 - Maintenance of any stakes and ties
 - Treatment of pests and diseases
 - Formative pruning to avoid future structure problems and to remedy disease
80. Where any new tree plantings fail to establish well, measures will be taken to resolve any underlying problems.
81. Where screening is a particular requirement, spacing will be selected to ensure good screening effect and to facilitate the healthy development of the better higher grade trees. Where screening is not a particular requirement, spacing will be selected to allow sufficient light into plantings in order to enable the development of a good shrub and field layer.
82. Where a screening effect is not required and good establishment has been achieved, the density of trees and shrubs will be reduced to enable a good field layer to develop.
83. Where new tree planting takes place in areas of particular sensitivity to wildlife, such as woodland areas and along hedgerows, the trees will be maintained in order to promote the wildlife interest of the management site.
84. Bat and bird boxes will be placed in suitable positions within existing tree belts and woodland. Further details on the design, number of features and locations are provided in paragraph 127.

Timing of Capital Works

85. Protective fencing will be erected around all retained woodland, plantation and tree belts prior to any works commencing on site and incorporating appropriate buffers, where required. Where possible, augmentation planting will be undertaken prior to or in the early stages of the construction phase, however, this will only occur where there is no risk of damage to new planting from indirect effects, such as dust pollution.
86. All planting will be undertaken at the appropriate time of year (November to February).

Annual Works

General Management Techniques

87. Subsequent to the initially intensive maintenance the new trees will require the following general management works:
- Maintenance of rabbit guards and other forms of protection
 - Maintenance of good levels of soil fertility

- Maintenance of adequate levels of soil moisture which may require irrigation during dry periods
 - Maintenance of any stakes and ties
 - Removal of guards, stakes and ties at appropriate times
 - Treatment of pests and diseases
 - Formative pruning to avoid future structure problems and to remedy disease
88. The woodlands and tree belts will be managed in accordance with multi-disciplinary advice from arboricultural, landscape and ecological specialists to maximise biodiversity and wildlife value. Areas will vary as to their treatment. The overall aim will be to encourage a diverse structural and species mix that provides a wildlife corridor between adjacent habitat patches and provides high quality habitat in its own right.
89. Whilst every effort will be made to secure and enhance the wildlife value of the woodland habitat by ensuring a range of species at various stages of maturity, there will be an overriding management objective to secure the retention of the trees that are in a safe and healthy condition.
90. Deadwood will be retained on site and piled up underneath the main canopy to create invertebrate habitat and shelter for small mammals. Brash will be removed off site as this has a low wildlife value and the excessive piling of cut material could compromise the value of the woodland understory and field layer species. Arboreal ivy will not be removed from a tree unless it threatens the growth and life of the tree.
91. All management involving tree removal and remedial arboricultural works to trees will be carried out to BS5837: 2005 by experienced contractors following an assessment of the trees by a suitably qualified ecological advisor to identify any risks to bats.

Modification of the works to avoid risk to bats, or further bat surveys, may be required for works to continue. Bat surveys will be undertaken at the optimal time of year, which is between May and September.

Remedial Works

92. During remedial works, consideration will be given to maintaining standing and ground based deadwood. Arisings from management will be used to create log piles in sites to suit reptiles, invertebrates and lower plants.
93. All poorly established and dead trees will be replaced. Where remedial pruning/general tree works are required, for health and safety reasons, appropriate bat surveys will be undertaken prior to works.

94. Bat boxes will be checked annually by a licensed bat surveyor and maintenance/replacement will be undertaken as necessary. Bird boxes will be checked annually and maintenance/replacement will be undertaken as necessary. Old nest material will be removed during the winter months.

Timing of Management

95. Tree management will be carried out between November and February to avoid the bird breeding season, which is March to August inclusive. Where essential works occur within that timeframe, appropriate assessment by an experienced ecologist/ornithologist will be carried out to ensure no nesting birds are present or would be disturbed by works.
96. Bat surveys of trees prior to management works will be undertaken between May and September and should bats be present, tree works will be undertaken in September to November, following appropriate mitigation.

Monitoring

97. During the construction phase, inspection of woodland habitats will be undertaken four times annually to assess effects of construction and to inform reactive management.
98. Annual monitoring of woodlands/plantation and tree belts will continue for the term of the Plan (12 years) and will be undertaken in April/May when woodland ground flora is visible.

Water Bodies and Associated Features

Management Objectives

99. The management objectives for the water bodies and associated features within the management site are as follows:
- To create new water bodies that meet current standards required (SUDS Adoption Guide; Cambridge City Council 2009)
 - To develop the wildlife habitat value of the water bodies
 - To adhere to the Environment Agency's Pollution Prevention Guidelines 'Works in, near or liable to affect watercourses' and to undertake managing and monitoring of the water bodies throughout the construction period
 - To provide appropriate, organic and long-term management of water bodies

Capital Works

100. Prior to construction works, all retained water bodies and associated features will be protected with appropriate fencing and signage. Site storage and compounds will be located at a minimum distance of 30m from these features.
101. The most northerly ditch that bisects the site will be directly and permanently lost as a result of the proposals (refer to Figure I for location). A survey for water voles will be undertaken prior to works commencing. In the unlikely event that water voles are discovered to be using this ditch, ecological advice will be sought before the commencement of works with regard to appropriate courses of action for maintaining the population.
102. The creation of three new areas of water in the form of seasonally wet ponds and ditches/swales (SUDS) throughout the development, will replace existing habitat to be lost (Areas 3, 5 and 7 Figure 3 and further details is shown on the landscape plans produced by David Jarvis Associates, Dwg ref: 1777/C50/007J (2008), 1777/C50/002U (2007), 1777/C50/004R (2007) and 1777/C50/003N (2007), Appendix II). This newly created habitat will provide opportunities for species associated with aquatic habitats including water voles and marginal aquatic vegetation.
103. The three tiered ponds will provide shallow temporary water storage. Flow control will be provided by hydrobrake flow control devices on all three of the attenuation ponds. The storage volume of the ponds from north to south at one in 100 years return period with an additional 20% for climate change will be 470m³, 320m³, and 1200 m³ respectively. The minimum pond outlet level from north to south will be 12.90m, 12.50m, and 13.65m and the discharge limited to 2.1 litres/sec, 1.1 litres/sec, and 53.5 litres/sec, respectively.
104. The pond edges will have varying profile and will be planted with suitable marginal aquatic vegetation. Marginal aquatic plant species will include species such as water plantain, meadowsweet, yellow flag, brooklime, water mint, soft-rush, greater pond-sedge and lesser pond-sedge (refer to Appendix III for idealised pond design code guidance). Plants will be of local provenance and sourced from a supplier such as Flora Locale.
105. The ditches/swales profile will vary, but will be to a maximum 1:2 with the outer face vertical supported by gabions. The shallow side of the swales will fall away from the edge of the tree belts to a depth of 0.7m over 6m and will be fed by a French drain that is a further 0.3m in depth. The ditches/swales will be of suitable depth to prevent marginal aquatic vegetation from drying out too quickly as a result of sediment or litter

build up. Silt traps across inflows carrying silt loads will have suitable access. Silt build up will be disposed of off site.

- 106. Swales will be sown with wet grassland species mix but other species will also be considered including gypsywort, water forget-me-not, marsh-marigold, pendulous sedge, soft-rush, and tufted hair-grass.
- 107. Log piles, sourced using material from the management site (for example, from tree management works), will be created around the ponds to provide refuge and hibernacula for reptiles, amphibians and invertebrates.

Timing of Capital Works

- 108. Prior to works commencing, a water vole survey will be undertaken of the ditch to be removed. This will be carried out between April and October leaving suitable time to mitigate for any impacts should this species (and other species, such as reptiles) be recorded.
- 109. The destruction of the ditch will be undertaken in the winter months, but where water voles are identified, works will be undertaken in October (taking into consideration also the sensitive lifecycles of other species (reptiles and amphibians)).
- 110. Appropriate protective fencing around retained water bodies will be in place prior to works commencing.
- 111. The creation of new water features will be undertaken during the construction of new access into the site, the Boulevard for example, however, they will not become suitable for use by wildlife until the construction phase in the vicinity of these new features is complete and the habitats have had time to mature.

Annual Works

General Management Techniques

- 112. No introductions of fish, crayfish or plants into the water bodies will be permitted, as any non-native species could pose a risk to ecology. No feeding of any waterfowl will be permitted, including ducks and Canada geese.
- 113. To protect marginal vegetation, the use of weed killer and other chemicals will be kept to a minimum. Spot removal of weeds and invasive species will be carried out by hand where removal is necessary.
- 114. Maintenance of open and shaded sections of the ponds: A minimum of one-third open water in the ponds will be maintained. Periodic maintenance will ensure the ponds do not become choked with accumulating plant debris and emergent vegetation. No more

than one third of each pond will be cleared during a single operation and management will be undertaken on a rotational basis.

- 115. Success of aquatic plant colonisation: Once established, a healthy, diverse and vigorous growth of aquatic and bankside vegetation will be maintained. Should planting be required to augment natural colonisation of the ponds, native locally sourced species will be used. The spread of any invasive, exotic species will be monitored and controlled by hand to ensure the growth of other species is not suppressed.
- 116. The management of ditches/swales will be carried out in rotation. Every third year sections of the ditch/swales will be cleared by mechanical means and vegetation will be left to re-grow naturally to promote species diversity.
- 117. Deadwood and other organic material naturally occurring within the water bodies will be allowed to accumulate unless they pose a risk to the primary function of the water bodies as SUDS for the development. The only regular in-channel management will be the removal of any litter and rubbish.
- 118. Litter and rubbish will be removed from the ponds as part of on-going management of the site, as necessary. Silt/debris accumulation will be removed on a minimum three-year rotational basis by either mechanical or manual means. All debris will be removed and used to create habitat piles close to the water bodies.

Remedial Works

- 119. Marginal and aquatic vegetation will not be allowed to cover more than two thirds of the ponds surface. Vegetation removed from the ponds will be left on the banks for a period of 48 hours, to allow any aquatic fauna present to return to the pond. The vegetation will then be removed from the site.
- 120. Should herbicide be required for the establishment of new planting, then these will be restricted to a glyphosate approved by Natural England and the Environment Agency as suitable for use near water bodies. Guidelines for the use of herbicides on weeds in or near to water bodies will be followed (refer to PB2289; MAFF, 1995).
- 121. It is possible that algal blooms may occur under certain weather conditions. Some algal blooms are severely toxic to animals (such as dogs) and humans. Different types of algal bloom require different methods of control. For example, filamentous algae can be removed by raking and leaving the algae to rest on the bank for 24 hours to allow invertebrates to escape back into the water before removal off site. Advice should be sought from experienced contractors. No chemical treatments will be used.

Timing of Management

122. General maintenance and remedial works will be undertaken in the winter to avoid aquatic stages of species lifecycles. Where water vole is present, works will be undertaken in October.

Monitoring

123. During the construction phase, inspection of water bodies and associated features, including Hobson's Brook, will be undertaken four times annually to assess effects of construction and to inform reactive management.
124. The water bodies within the management site will be monitored annually for the duration of the Plan (12 years) to assess their condition. Monitoring will consider the following:
- Success of aquatic plant colonisation
 - Maintenance of open and shaded sections of the ponds
 - Water quality
 - Water vole, otter and aquatic invertebrate presence/absence on the management site
125. Aquatic flora will aid the assessment, where appropriate, based on the tolerance/preference of certain species for enriched or clean water.

New Species Specific EnhancementsManagement Objectives

126. The management objectives for the new species specific enhancements are to ensure that features continually offer a habitat resource for the target species. These specific provisions, in combination with the new and existing habitats, aim to boost species populations, particularly those susceptible to disturbance (reptiles, bats, birds and amphibians), to a stable and sustainable level.

Capital Works

127. Each new building will support a minimum of four integral nesting bird features, including boxes and designed-in cavities; refer to Appendix IV for design examples. A minimum of 20 bat boxes and 20 bird boxes will be provided within the woodland/plantation and tree belts across the development, on suitable trees away from well-lit built up areas. The size of each building and availability of suitable locations (taking into account adjacent habitats, aspect, lighting etc.) will determine the positioning of the features.

128. Reptile and amphibian hibernacula will be provided in the form of log piles in the woodland understorey and adjacent to new water bodies.

Timing of Capital Works

129. Habitat creation will be phased in accordance with the construction works. Deadwood will be created in undisturbed areas away from the works, and bat and bird boxes will be installed as early on in the construction as possible without exposing new habitats to disturbance. Other features will be installed within new builds and will not be available until completion of the works.

Annual Works

Monitoring

130. During the construction phase, inspection of habitats supporting the new species specific features will be undertaken four times annually to assess effects of construction and to inform reactive management.
131. Annual checks will be made of the bat boxes to determine their use by bats. Regular inspections of the roost sites will be undertaken. It is anticipated that the annual long-term monitoring of the bat boxes will be assigned to a local bat conservation group.
132. Annual checks will be carried out of nest boxes prior to the nesting season to remove old nesting material. Any damaged boxes will be replaced.
133. Reptile and amphibian hibernacula will be monitored annually to ensure their condition remains favourable. Should the refuges show signs of water logging, these will be carefully dismantled during the summer months and re-created in suitable locations elsewhere within the designated areas (woodland understorey and adjacent to new water bodies). Habitat piles will be removed if there is a risk of fire through vandalism.

RESPONSIBILITIES

134. Implementation of the NCMP is the responsibility of Countryside, Liberty and Addenbrooke's through a management company and will be undertaken by suitably qualified approved contractors and site staff. Works will be implemented by site staff, suitably qualified contractors and ecologists. The review of the NCMP will be undertaken annually following monitoring in consultation with Cambridge City Council.
135. Public liability insurance will be maintained by Countryside, Liberty, and Addenbrooke's.

Contractor Responsibilities

136. All materials, workmanship, quality and operations will be in accordance with current British Standards, Codes of Practice and legislation.
137. An Ecological Clerk of Works will be appointed by the contractor during the following capital works:
- Arboricultural removal or maintenance procedure to monitor for nesting birds and bats, and to advise as appropriate
 - Hedgerow removal or maintenance procedure to monitor for nesting birds and other wildlife, and to advise as appropriate
 - Ditch removal and mitigation (subject to species surveys)

Monitoring ResponsibilitiesConstruction Phase

138. An Ecological Clerk of Works will be appointed to carry out monitoring during the construction phase including:
- Quarterly checks of component habitats to ensure maintenance of favourable condition during the construction phase
 - Quarterly checks of protective measures around retained and new features (grassland, hedgerows, woodland/plantation and tree belts, and water bodies (including Hobson's Brook))
139. An Ecologist will be appointed to undertake the following tasks:
- Specific species surveys prior to works commencing (bat and water voles surveys for example)
 - Annual monitoring of species populations during the construction phase
 - Annual monitoring of vegetation communities, including grassland (calcareous and wet grassland) and marginal plants to monitor management and ensure favourable status of habitats during the construction phase
140. Annual reviews of the Plan will be undertaken following annual monitoring and surveys. The Plan will be revised accordingly in consultation with involved parties.

Operational Phase (12 year term)

141. An Ecologist will be appointed to undertake the following tasks:
- Annual monitoring of species populations for the term of the Plan (12 years)
 - Annual monitoring of vegetation communities, including grassland (calcareous

and wet grassland) and marginal plants to monitor management and ensure favourable status of habitats for the term of the Plan (12 years)

142. Annual reviews of the Plan will be undertaken during its term following annual monitoring and surveys. The Plan will be revised accordingly in consultation with involved parties.

SPECIES SPECIFIC CONSIDERATIONS

143. Species specific considerations within this Plan are summarised in Table 2, below.

Table 2: Species Specific Management Considerations

Flora or Fauna	Habitat or Feature	Management Considerations
Water vole/Otter	New ponds and swales	Creation of new habitat providing, shelter, food resources and increased connectivity. Varied bank structure for foraging and burrowing opportunities
	Hedgerows, woodland and tree belts	Creation of additional shelter and food resources
	Management site	Annual survey
Amphibians	Hedgerows, woodland and tree belt	Creation of additional shelter and food resources
	Northern ditch on management site	Removal and relocation to suitable habitat on site
	Creation of hibernacula	Additional refuge and protection from disturbance
Aquatic invertebrates	New ponds and swales	Creation of new habitat providing, shelter, food resources and increased connectivity
	Management site	Annual survey
Reptiles	Northern ditch on management site	Removal and relocation to suitable habitat on site
	New ponds and swales	Provide suitable foraging for grass snake
	Creation of hibernacula	Additional refuge and protection

Flora or Fauna	Habitat or Feature	Management Considerations
		from disturbance
Birds	Buildings, woodland and tree belts	Provision of integral nesting features and bird boxes, monitoring of nesting birds prior to maintenance/management works
	Buildings	Each new building will support a minimum of four integral nesting features
	Management site	Checks for nesting birds within suitable habitats prior to works
Bats	Woodland and tree belts	Bat boxes, monitoring during maintenance works
	Hedgerow, watercourses, woodland and tree belts	Enhancement of existing and creation of new habitats providing shelter, food resources and increased connectivity
Badger	Hedgerows, woodland and tree belts	Enhancement of existing and creation of new habitats providing shelter, food resources and increased connectivity, encouraging use of the management site
Flora	New ponds and swales	Appropriate management and timing of works
	New grassland	Control of invasive species Appropriate cutting regime

RECOMMENDED WORKS SCHEDULES

144. The following tables (Tables 3 and 4) provide guidance on the work tasks to be undertaken (capital works; Table 3 and annual works; Table 4) and the recommended timings of these works.

Table 3: Guidance for Work Programme – Capital Works

Capital Works		Responsibility (following appointment)	Recommended Time of Year to Undertake Works (shown in grey)											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Water vole survey of ditch to be lost	Suitably qualified ecological consultant												
2	Mitigation prior to ditch removal (if protected species present)	Suitably qualified ecological consultant and site contractor												
3	Bat assessment/survey of trees prior to removal	Suitably qualified ecological consultant												
4	Mitigation prior to tree removal (if bats present)	Suitably qualified ecological consultant												
5	Protection of retained habitats	Site Contractor and Ecological Clerk of Works												
6	Removal of ditch	Site Contractor and Ecological Clerk of Works												
7	Vegetation removal (if works not carried out during this period, then Ecological Clerk of Works present to oversee)	Site Contractor												

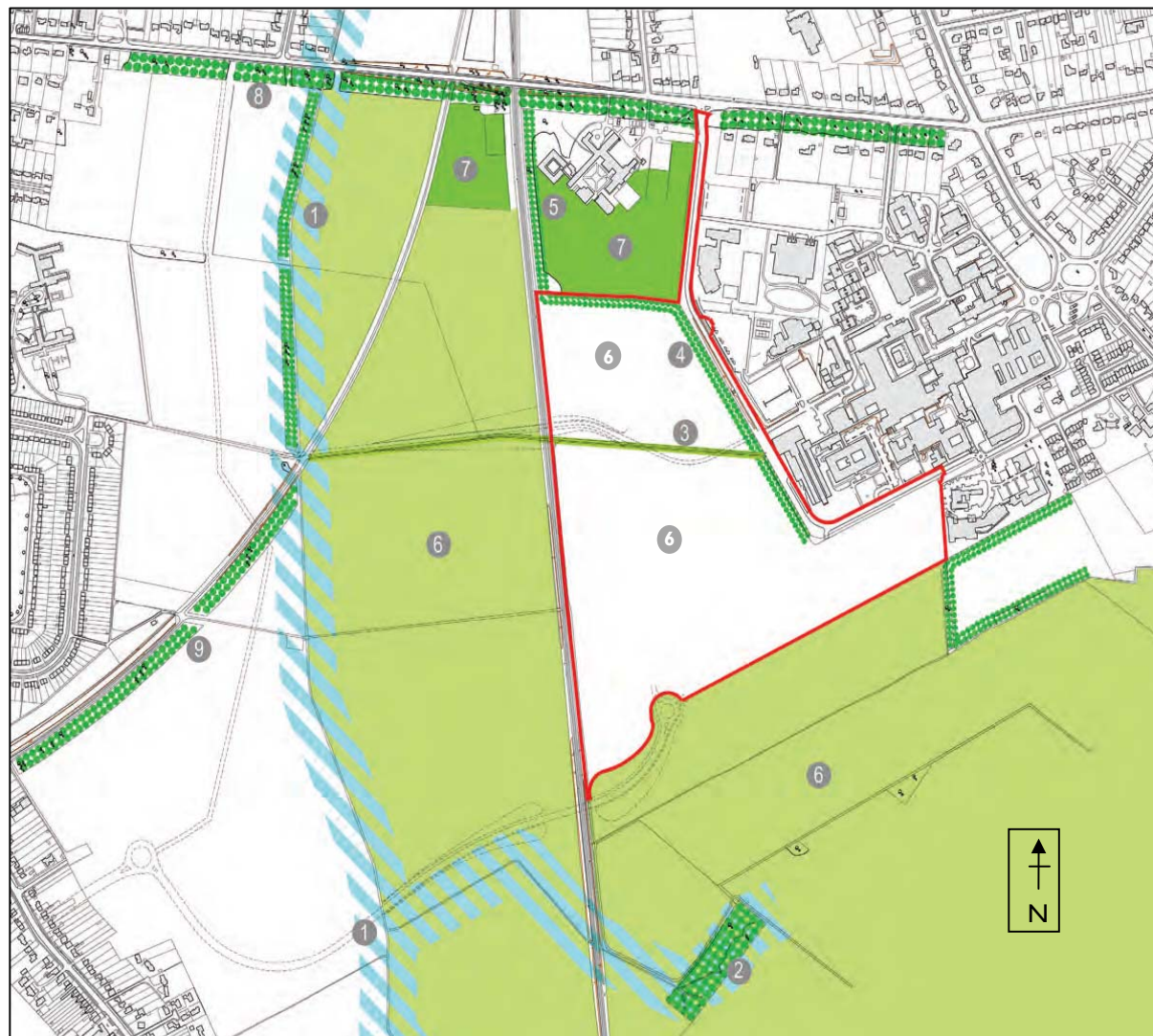
Capital Works		Responsibility (following appointment)	Recommended Time of Year to Undertake Works (shown in grey)											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	Tree removal (if bats present)	Site Contractor and Ecological Clerk of Works / Ecologist												
9	New Planting	Site Contractor												
10	Grassland creation / sowing													
11	Creation of refuges / hibernacula (log piles)	Ecological Clerk of Works												
12	Installation of bat and bird boxes on retained features	Ecological Clerk of Works / Ecologist												
13	Protection of new planting and refuges / hibernacula	Site Contractor and Ecological Clerk of Works												

Table 4: Guidance for Work Programme – Annual Works

Annual Works		Responsibility (following appointment)	Recommended Time of Year to Undertake Works (shown in grey)											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Cutting of wildflower grassland and longer edge zones	Management Company												
2	Mowing of amenity grassland (as required) retaining longer edges	Management Company												
3	Hedgerow management	Management Company												
4	Bat assessment / survey prior to remedial tree works	Suitably qualified Ecological Consultant												
5	Remedial tree works (no constraints)	Arboricultural Contractor / Management Company												
6	Remedial tree works (bats present)	Suitably qualified Ecological Consultant / Arboricultural Contractor												
7	Bat box checks (condition and replacement as necessary)	Suitably qualified Ecological Consultant / Licensed Bat Worker												

Annual Works		Responsibility (following appointment)	Recommended Time of Year to Undertake Works (shown in grey)											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	Bird box checks (condition, remove old nesting material and replacement as necessary)	Management Company												
9	Reptile hibernacula / refuge checks	Suitably qualified Ecological Consultant												
10	Ditch / Swale Management (three-yearly rotational basis)	Management Company / Suitably qualified Ecological Consultant												
11	Emergent vegetation management	Management Company / Suitably qualified Ecological Consultant												
12	Removal of litter	Management Company												
13	Treatment of algal blooms	Management Company with specialist advice												
14	Management of woodland / tree belts	Management Company												
15	Establishment monitoring / maintenance of new trees and hedges	Management Company												

Annual Works		Responsibility (following appointment)	Recommended Time of Year to Undertake Works (shown in grey)											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
16	Quarterly inspections of working areas and protective fencing	Ecological Clerk of Works												
17	Quarterly inspections of habitats, including Hobson's Brook	Ecological Clerk of Works												
18	Annual faunal surveys	Suitably qualified Ecological Consultant												
19	Annual hedgerows, woodland / plantation and tree surveys	Suitably qualified Ecological Consultant												
20	Annual grassland survey	Suitably qualified Ecological Consultant												
21	Invasive species monitoring	Management Company with specialist advice												
22	Annual review of Plan	Management Company and other interested parties												
23	Revision of Plan, as necessary	Management Company and other interested parties												



1. Hobson's Brook and corridor
2. Nine Wells Local Nature Reserve
3. Drainage ditch and public footpath
4. Existing belt of mature trees along Robinson Way
5. Existing belt of mature trees to west boundary Long Road College
6. Arable agricultural land
7. Close mown grass recreational spaces and playing fields
8. Mature tree belt along Long Road
9. Dismantled Railway & plantation

Key Site boundary

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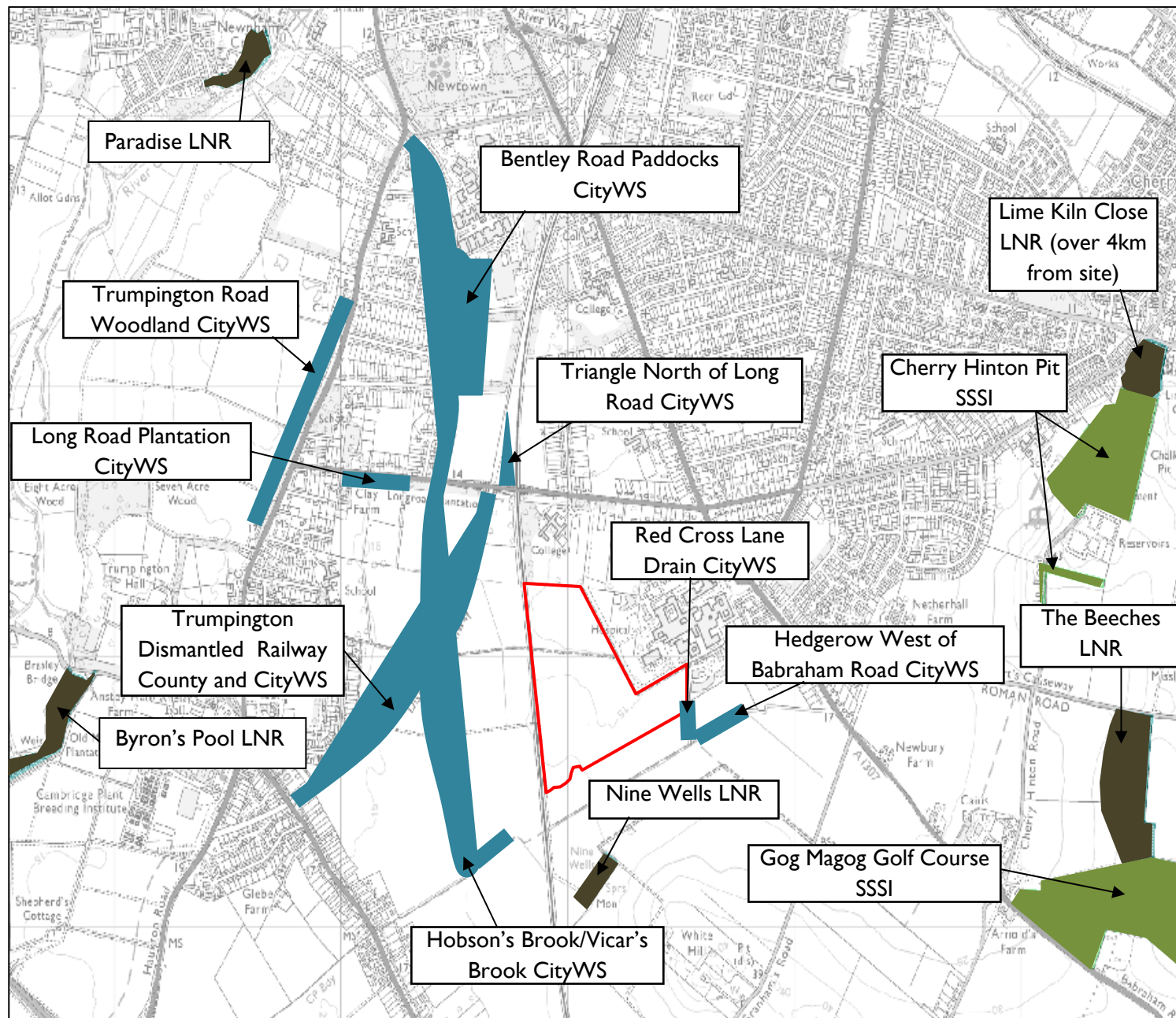
Project Cambridge Medical Campus

Title
 Existing Habitats (map sourced from David
 Jarvis Associates)

Date
 Feb 2008

Scale
 Schematic

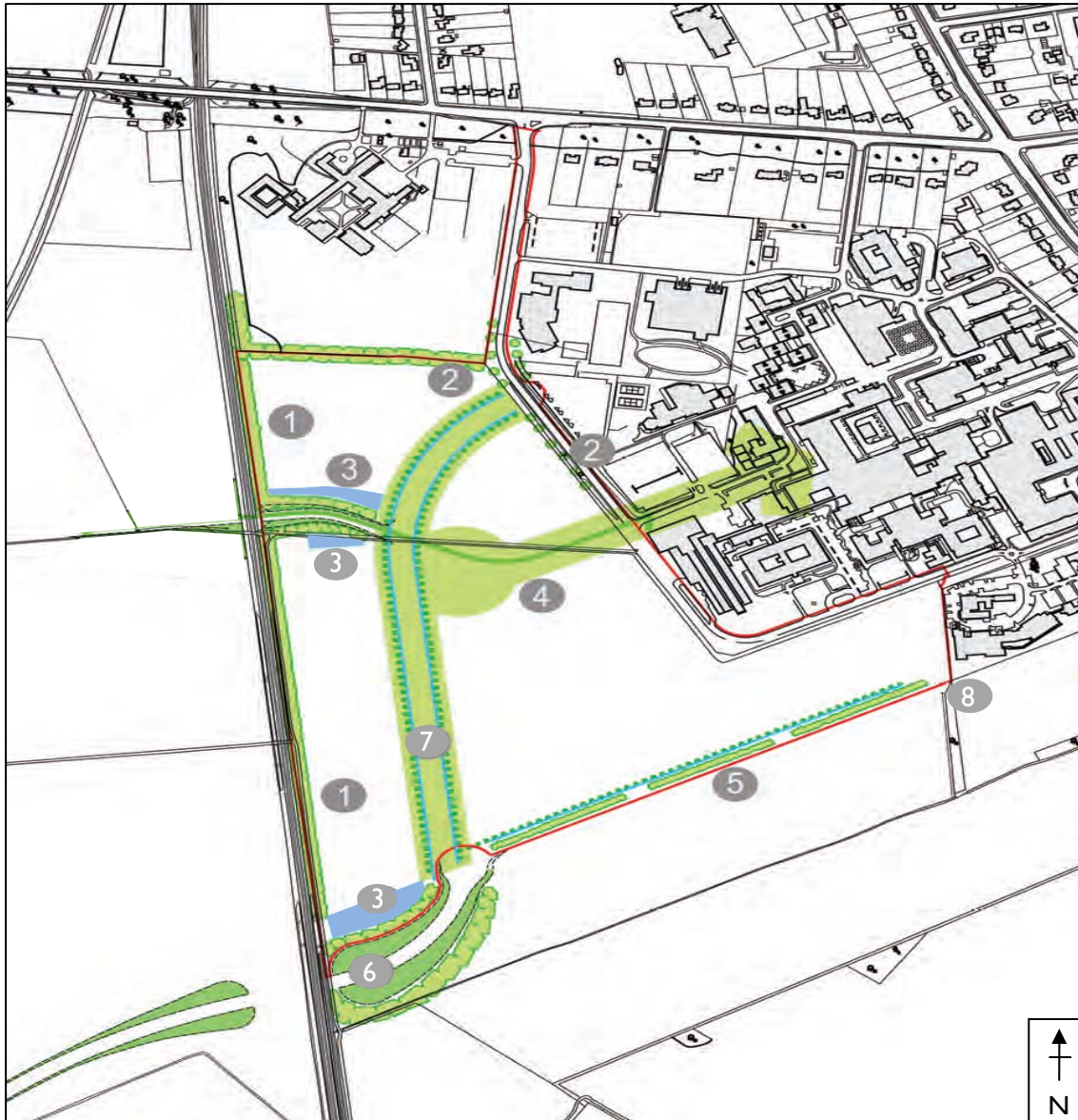
Figure
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ecosulis Ltd ECOLOGICAL AND ARBORICULTURAL CONSULTING The Rickyard, Newton St Loe, Bath, BA2 9BT Tel: 01225 874040 Fax: 01225 874554		
Project	Countryside Properties	
Title	Site Location	
Design. sites	Cambridge Medical Campus	
Date	Scale	Figure
Feb 2008	Schematic	2

Key

- Site Boundary
- Site of Special Scientific Interest (SSSI)
- Local Nature Reserve (LNR)
- County and City Wildlife Sites



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Project	Cambridge Medical Campus	
Title	New habitats (map sourced from David Jarvis Associates)	
Date	Scale	Figure
Feb 2008	Schematic	3

1. New woodland/tree belts
2. Existing tree belts along north and north-east boundaries
3. New water bodies and associated features
4. New formal pedestrian oriented landscape treatment to public realm links with existing campus
5. New woodland/tree belt with new swale feature
6. Embankments for Addenbrooke's Access Road (Promoted by County Council)
7. New avenue to Boulevard, with new swale
8. Red Cross Lane Drain CityWS

REFERENCES

Biodiversity Partnership and the UK Government (2007) UK Biodiversity Action Plan

British Standards Institute (2005) BS5837 Trees in Relation to Construction

DEFRA (2000) “Working with the grain of nature” A biodiversity strategy for England

Cambridge City Council (2009) Cambridge Sustainable Drainage Design and Adoption Guide. Accessed at www.cambridge.gov.uk/ccm/content/planning-and-building-control/urban-design/sustainable-drainage-systems.en

Cambridgeshire County Council and Peterborough City Council (2003) Cambridgeshire and Peterborough Structure Plan

DEFRA (2000) ‘Working with the grain of nature’ A biodiversity strategy for England

DEFRA (2007) “A Strategy for England's Trees, Woods and Forests”. The ETWF Strategy.

East of England Regional Assembly and the Forestry Commission (2003) “Woodland for Life” Regional Woodland Strategy for the East of England

HMSO (1997) The Hedgerows Regulations 1997 HMSO

Ministry of Agriculture, Fisheries and Food (1995) PB2289.

RPG6 (2000) Regional Planning Guidance Note 6: Regional Planning Guidance for East Anglia to 2016

South Cambridgeshire District Council (2004). Local Plan

South Cambridgeshire District Council (2004). Policy NE/5 Countryside Enhancement Areas.

Town and Country Planning Act (1990)

Town and Country Planning (Trees) Regulations 1999

TSO (2005) Planning Policy Statement 9: Biodiversity and Geological Conservation.

Cambridgeshire County Council (1997) Cambridgeshire's Biodiversity

Stace, C. (1997) New Flora of the British Isles 2nd Edition. Cambridge University Press.

APPENDIX I: SPECIES LIST OF FLORA AND FAUNA MENTIONED IN THE TEXT

Common Name	Latin Name
Flora:	
Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus excelsior</i>
Aspen	<i>Populus tremula</i>
Autumn hawkbit	<i>Leontodon autumnalis</i>
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>
Beech	<i>Fagus sylvatica</i>
Blackthorn	<i>Prunus spinosa</i>
Black medick	<i>Medicago lupulina</i>
Branched bur-reed	<i>Sparganium erectum</i>
Broad-leaved pondweed	<i>Potamogeton natans</i>
Brooklime	<i>Veronica beccabunga</i>
Brown bent	<i>Agrostis tenuis</i>
Chewing's fescue	<i>Festuca rubra var. Commutata</i>
Common knapweed	<i>Centaurea nigra</i>
Cowslip	<i>Primula veris</i>
Creeping bent	<i>Agrostis stolonifera</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Dogwood	<i>Cornus sanguinea</i>
Dog-rose	<i>Rosa canina</i>
Downy birch	<i>Betula pubescens</i>
English elm	<i>Ulmus procera</i>
Field maple	<i>Acer campestre</i>
Field scabious	<i>Knautia arvensis</i>
Flowering-rush	<i>Butomus umbellatus</i>
Fool's water-cress	<i>Apium nodiflorum</i>

Common Name	Latin Name
Flora:	
Frogbird	<i>Hydrocharis morsus-ranae</i>
Grape-hyacinth	<i>Muscari neglectum</i>
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>
Greater pond-sedge	<i>Carex riparia</i>
Grey willow	<i>Salix cinerea</i>
Goat willow	<i>Salix caprea</i>
Guelder-rose	<i>Viburnum opulus</i>
Gypsywort	<i>Lycopus europaeus</i>
Hard fescue	<i>Festuca ovina var. duriuscula</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hemp-agrimony	<i>Eupatorium cannabinum</i>
Hoary plantain	<i>Plantago media</i>
Holly	<i>Ilex aquifolium</i>
Hornbeam	<i>Carpinus betulus</i>
Horse-chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix</i>
Kidney vetch	<i>Anthyllis vulneraria</i>
Oak	<i>Quercus sp.</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Lady's bedstraw	<i>Galium verum</i>
Lesser pond-sedge	<i>Carex acutiformis</i>
Marsh gentian	<i>Gentiana pneumonanthe</i>
Marsh-marigold	<i>Caltha palustris</i>
Meadow buttercup	<i>Ranunculus acris</i>

Common Name	Latin Name
Flora:	
Meadowsweet	<i>Filipendula ulmaria</i>
Pendulous sedge	<i>Carex pendula</i>
Perennial flax	<i>Linum perenne</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Ragged-robin	<i>Lychnis flos cuculi</i>
Red campion	<i>Silene dioica</i>
Red clover	<i>Trifolium pratense</i>
Rough Hawkbit	<i>Leontodon hispidus</i>
Rough meadow-grass	<i>Poa trivialis</i>
Selfheal	<i>Prunella vulgaris</i>
Sheep's-fescue	<i>Festuca ovina</i>
Small-leaved lime	<i>Tilia cordata</i>
Snowdrop	<i>Galanthus nivalis</i>
Soft-rush	<i>Juncus effuses</i>
Small scabious	<i>Scabiosa columbaria</i>
Spreading hedge-parsley	<i>Torilis arvensis</i>
Sycamore	<i>Acer pseudoplatanus</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
Viper's-bugloss	<i>Echium vulgare</i>
Water avens	<i>Geum rivale</i>
Water-cress	<i>Rorippa nasturtium-aquaticum</i>
Water-crowfoot	<i>Ranunculus sp.</i>
Water forget-me-not	<i>Myosotis scorpioides</i>
Water mint	<i>Mentha aquatic</i>
Water-plantain	<i>Alisma plantago-aquatica</i>
Wayfaring-tree	<i>Viburnum lantana</i>

Common Name	Latin Name
Flora:	
White campion	<i>Silene latifolia</i>
Wild Angelica	<i>Angelica sylvestris</i>
Wild basil	<i>Clinopodium vulgare</i>
Wild carrot	<i>Daucus carota</i>
Wild cherry	<i>Prunus avium</i>
Wild clary	<i>Salvia verbenaca</i>
Wild liquorice	<i>Astragalus glycyphyllos</i>
Wild marjoram	<i>Origanum vulgare</i>
Wild privet	<i>Ligustrum vulgare</i>
Wild teasel	<i>Dipsacus fullonum</i>
Yarrow	<i>Achillea millefolium</i>
Yellow iris	<i>Iris pseudacorus</i>
Yew	<i>Taxus baccata</i>

Common Name	Latin Name
Fauna:	
Badger	<i>Meles meles</i>
Canada goose	<i>Branta canadensis</i>
Common lizard	<i>Lacerta vivipara</i>
Corn bunting	<i>Miliaria calandra</i>
Golden plover	<i>Pluvialis apricaria</i>
Grass snake	<i>Natrix natrix</i>
Great crested newt	<i>Triturus cristatus</i>
Kingfisher	<i>Alcedo atthis</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Reed bunting	<i>Emberiza schoeniclus</i>

Common Name	Latin Name
Fauna:	
Lapwing	<i>Vanellus vanellus</i>
Otter	<i>Lutra lutra</i>
Pipistrelle bat	<i>Pipistrellus sp.</i>
Song thrush	<i>Turdus philomelos</i>
Water vole	<i>Arvicola terrestris</i>
White-clawed crayfish	<i>Austropotamobius pallipes</i>
Yellow wagtail	<i>Motacilla flava</i>

APPENDIX II: LANDSCAPE PLANS, DAVID JARVIS ASSOCIATES

PLANTING SCHEDULE

SEMI-MATURE TREES				
Species	Girth (cm)	Height (cm)	Clear stem height	Root
Platanus x acenfolia	20-25	min. 450	1.8m	RB

Trees to be underground guyed. Refer to 1777/C50/208 CONSTRUCTION for tree pit details.

STANDARD TREE PLANTING				
CODE	SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT MIN. BRANCHES
AG	Alnus glutinosa	10-12	300-350	BR 4
BP	Betula pubescens	10-12	300-350	BR 3
FE	Fraxinus excelsior	12-14	350-425	BR 4
PA	Prunus avium	10-12	300-350	BR 4
QR	Quercus robur	10-12	300-350	RB 4

Trees to be short triple staked with a 1m dia. circle of mulch around the base of each tree.

HEDGE PLANTING		
Species	Height (cm)	Root
Fagus sylvatica	60-90 cm	BR

To be planted at 5 plants/lin m in a double staggered row in a trench pit 500 x 500mm, backfilled as specified. To be mulched to a min depth of 75mm along length. Temporary post and two wire fence to be in place until established. To be maintained at 1.2m height.

GROUNDCOVER PLANTING (TO TRAIL OVER GABIONS)		
Species	Pot size	Density per m²
A.Artemisia ludoviciana 'Valerie Finnis'	0.5L	8
B.Partenocissus quinquefolia	0.5L	8

To be planted at 300 – 350mm centres at locations shown at the base of the hedge to trail over gabions.

SWALE PLANTING MIX A (for base of the bank)		
Species	Pot Size	%
Carex riparia	0.5L	30
Juncus effusus	0.5L	30
Lythrum salicaria	0.5L	20
Polygonum bistorta	0.5L	20

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres.Caltha spp. and Filipendula spp to be planted on the edges of planting areas higher up the bank.

MIX B (for top of the bank and sections higher on slope)		
Species	Pot Size	%
Achillea millefolium	0.5L	15
Carex sylvatica	0.5L	35
Deschampsia caespitosa	0.5L	35
Lychnis flos-cuculi	0.5L	15

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres.

BULBS	
Species	Density %
Narcissus " Mount Hood"	100

To be scattered randomly in areas shown at 25 per m².

GRASS – general areas
DLF PRO70 MULTI PURPOSE AMENITY MIX sown at 35g/m2

GRASS – swale
DLF PRO FLORA 3 DAMP LOAMY SOILS sown at 5g/m2

















ROUNDAABOUT PLANTING		
Species	Pot Size	%
Rubus 'Betty Ashburner'	0.5L	60
Rosa 'Flower Carpet Red'	0.5L	40

To be planted randomly in groups of 3 to 5 at 500mm centres. All mulched to 75mm depth.

Species	Pot Size
Vinca minor	0.5L

To be planted at 500mm centres and mulched to 75mm depth.

KEY

-  APPLICATION BOUNDARY
-  WILDFLOWER GRASS
-  SLAB PAVING - MARSHALLS SAXON, NATURAL, 450 x 450 x 63mm, SQUARE COURSE
-  SEMI-MATURE TREE PLANTING
-  HEDGE PLANTING
-  GRASS
-  BULB PLANTING
-  GROUNDCOVER PLANTING AT THE TOP OF GABION WALL
-  SWALE PLANTING
-  GROUNDCOVER PLANTING
-  GROUNDCOVER PLANTING Vinca minor
-  STONE FILLED GABION WALL
-  500mm WIDE STONE TRENCH AT BASE OF WALL
-  200mm FRENCH DRAIN
-  LIGHTING COLUMNS - REFER TO FABER MAUNSELL Dwg. T53337/1300/001A FOR DETAILS
-  TARMAC



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B	270110	Amendments to the planting schedule.
A	070110	Amendments to the planting
Revision	Date	Description

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CAMBRIDGE MEDIPARK LTD

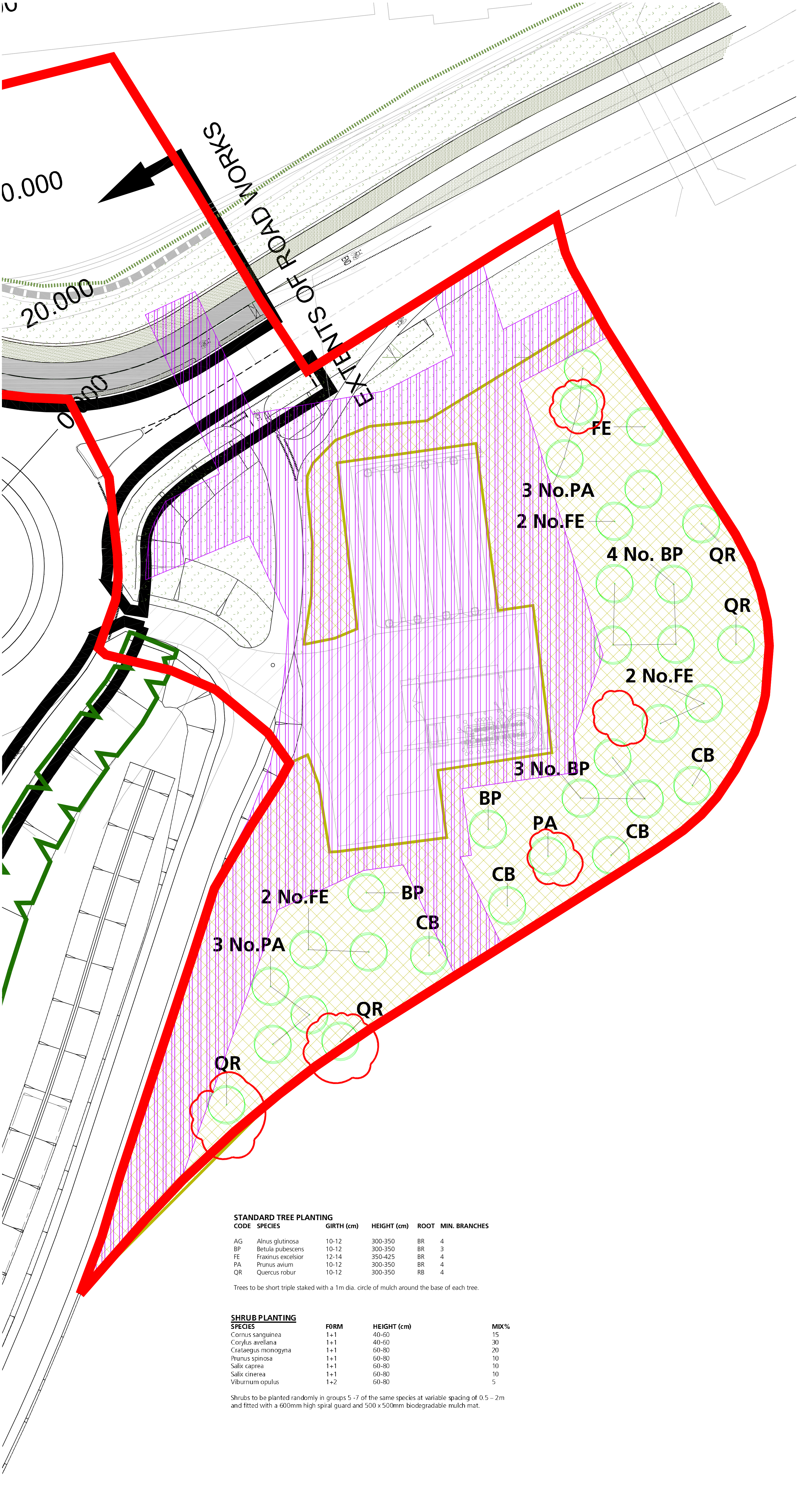
Project
**CBC BOULEVARD
CONDITION 50**

Drawing Title
**NORTHERN ROUNDAABOUT
DETAIL**

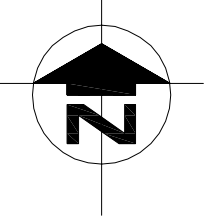
Scale
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Date
SEPT 2009

Drawing No.
1777/C50/016B



- KEY
- APPLICATION BOUNDARY
- SEMI-MATURE TREE PLANTING
- STANDARD TREE PLANTING
- HEDGE PLANTING
- GRASS
- BULB PLANTING
- WILDFLOWER GRASS
- GROUNDCOVER PLANTING AT THE TOP OF GABION WALL
- SWALE PLANTING
- SLAB PAVING - MARSHALLS SAXON, NATURAL, 600 x 600 x 63mm, SQUARE COURSE
- FLINT FILLED GABION WALL
- 500mm WIDE STONE TRENCH AT BASE OF WALL
- 120mm FRENCH DRAIN WITH SELF BINDING GRAVEL TOP SURFACE
- LIGHTING COLUMNS - REFER TO FABER MAUNSELL Dwg. T53337/1300/001A FOR DETAILS
- TARMAC
- WOODLAND PLANTING
- SHRUB PLANTING
- WETLAND GRASS
- WETLAND GRASS AND MARGINAL PLANTING
- PROPOSED BENCH VEKSO, AP 1004, ASH WOOD 62cm WIDE, 1980cm LONG (FOR BENCH DETAILS REFER TO DRAWING 1777/C50/014)
- 3m SERVICES EASEMENTS AND OFFSETS FROM PUMPING STATION



STANDARD TREE PLANTING					
CODE	SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT	MIN. BRANCHES
AG	Alnus glutinosa	10-12	300-350	BR	4
BP	Betula pubescens	10-12	300-350	BR	3
FE	Fraxinus excelsior	12-14	350-425	BR	4
PA	Prunus avium	10-12	300-350	BR	4
QR	Quercus robur	10-12	300-350	RB	4

Trees to be short triple staked with a 1m dia. circle of mulch around the base of each tree.

SHRUB PLANTING			
SPECIES	FORM	HEIGHT (cm)	MIX%
Cornus sanguinea	1+1	40-60	15
Corylus avellana	1+1	40-60	30
Crataegus monogyna	1+1	60-80	20
Prunus spinosa	1+1	60-80	10
Salix caprea	1+1	60-80	10
Salix cinerea	1+1	60-80	10
Viburnum opulus	1+2	60-80	5

Shrubs to be planted randomly in groups 5 -7 of the same species at variable spacing of 0.5 – 2m and fitted with a 600mm high spiral guard and 500 x 500mm biodegradable mulch mat.

Rev A 090410 Amended to suit engineers comments.

Revision

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Project

CBC BOULEVARD
CONDITION 50

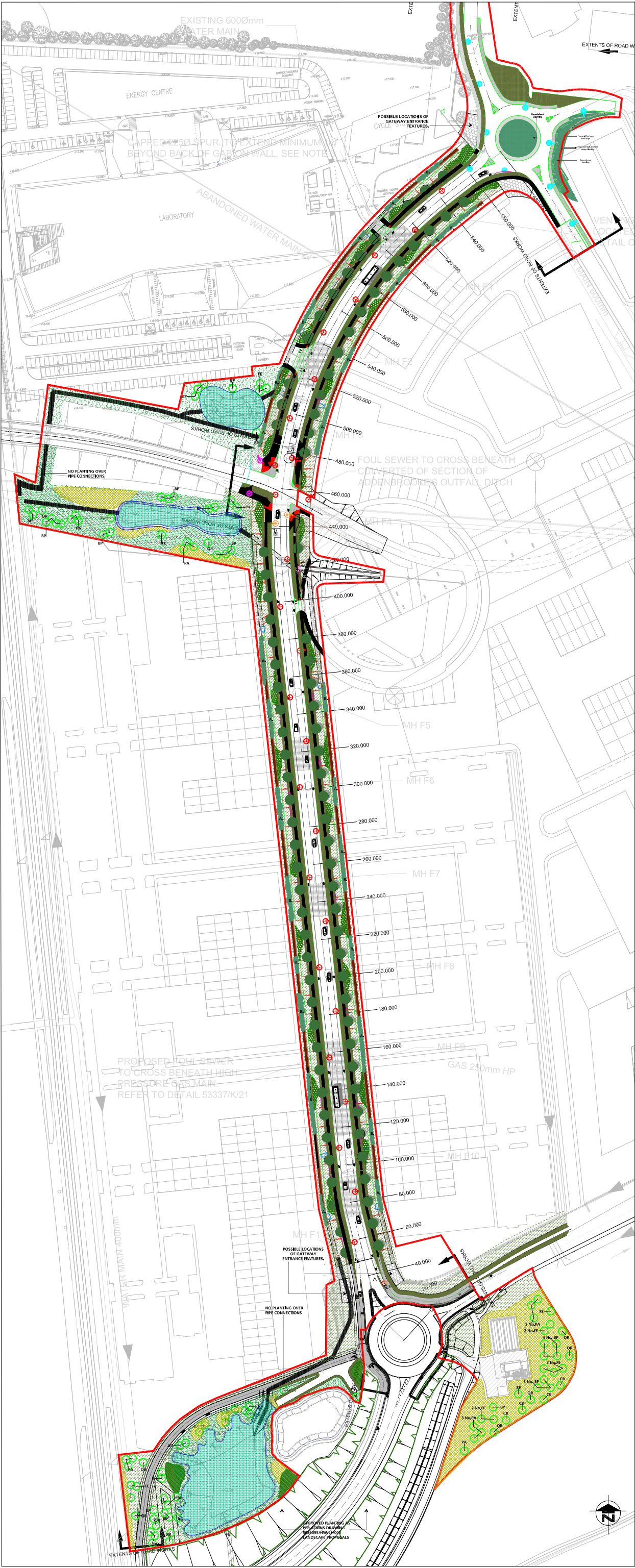
Drawing Title

PUMPING STATION PLANTING DETAIL

Scale
1:200 at A1

Date
MARCH 2009

Drawing No.
1777/C50/015A



PLANTING SCHEDULE

SEMI-MATURE TREES				
Species	Girth (cm)	Height (cm)	Clear stem height	Root
Platanus x acerifolia	20-25	min. 450	1.8m	RB

Trees to be underground gayed. Refer to 1777/C50/011 for tree pit details.

STANDARD TREE PLANTING				
CODE	SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT MIN. BRANCHES
AG	Alnus glutinosa	10-12	300-350	BR 4
BP	Betula pubescens	10-12	300-350	BR 3
FE	Fraxinus excelsior	12-14	350-425	BR 4
PA	Prunus avium	10-12	300-350	BR 4
QR	Quercus robur	10-12	300-350	BR 4

Trees to be short triple staked with a 1m dia. circle of mulch around the base of each tree.

WOODLAND PLANTING				
SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT MIN. BRANCHES	MIX%
TREES				
Betula pubescens	8-10	250-300	BR 3	15
Carpinus betulus	10-12	300-350	BR 4	10
Fraxinus excelsior	8-10	250-300	BR 3	35
Prunus avium	10-12	300-350	BR 4	10
Quercus robur	10-12	300-350	BR 4	30

FEATHERED TREES				
Betula pubescens		175-200	BR 5	20
Carpinus betulus		150-175	BR 3	15
Fraxinus excelsior		200-250	BR 5	30
Prunus avium		175-200	BR 5	15
Quercus robur		175-200	BR 5	20

TRANSPLANTS				
FORM	HEIGHT (cm)			MIX%
Acer campestre	1+1	60-80		10
Cornus sanguinea	1+1	40-60		15
Corylus avellana	1+1	40-60		25
Prunus spinosa	1+1	60-80		15
Eurostylis europaeus	1+1	60-80		20
Viburnum lantana	1+2	40-60		5
Viburnum opulus	1+2	60-80		10

Plant standard trees with varying spacings of 2.5m - 4m in groups of 10-20 and fit with a long single stake and spiral guard. Plant feathered trees with 2m spacings in groups of 10-20. Feathered trees to have single stake (1m above ground level) and a 600mm shrub guard. Distribute all tree sizes evenly across the area. Plant transplants with 0.5-2m spacings in groups of 25-75. Fit with a 600mm high spiral guard. All planting to be fitted with a 500 x 500mm biodegradable mulch mat.

SHRUB PLANTING				
SPECIES	FORM	HEIGHT (cm)		MIX%
Cornus sanguinea	1+1	40-60		15
Corylus avellana	1+1	40-60		30
Crataegus monogyna	1+1	60-80		20
Prunus spinosa	1+1	60-80		10
Salix caprea	1+1	60-80		10
Salix cinerea	1+1	60-80		10
Viburnum opulus	1+2	60-80		5

Shrubs to be planted randomly in groups 5-7 of the same species at variable spacing of 0.5 - 2m and fitted with a 600mm high spiral guard and 500 x 500mm biodegradable mulch mat.

WETLAND GRASS MIX				
GRASS SEED MIX - 80%				
Festuca ovina (Sheep fescue)				
Festuca ovina var. duriscula (Hard fescue)				
Festuca rubra ssp. litoralis (Slender creeping red fescue)				
Festuca rubra var. commutata (Cheewings fescue)				
Agrostis tenuis (Broomtop bent)				
Agrostis stolonifera (Creeping bent)				
Cynurus cinctus (Crested dog's tail)				
Poa trivialis (Rough meadow grass)				

WILDFLOWER SEED MIX - 20%				
Alopecurus pratensis-aquaticus (Water plantain)				
Angelica sylvestris (Wild angelica)				
Centaurea nigra (Common knapweed)				
Opuncia fulgens (Wild rose)				
Echium vulgare (Viper's bugloss)				
Eupatorium cannabinum (Hemp agrimony)				
Filipendula ulmaria (Meadowweet)				
Geum rivale (Water avens)				
Hydrocotyle monensis (Frogbit)				
Leontodon autumnalis (Autumn hawkbit)				
Leontodon hispidus (Rough hawkbit)				
Leucanthemum vulgare (Oxeye daisy)				
Lotus pedunculatus (Greater bird's foot trefoil)				
Lycchnis flos-cuculi (Ragwort)				
Lythrum salicaria (Purple loosestrife)				
Medicago lupulina (Black medick)				
Plantago lanceolata (Ribwort plantain)				
Prunella vulgaris (Selfheal)				
Ranunculus acris (Meadow buttercup)				
Origanum vulgare (Wild marjoram)				
Silene dioica (Red campion)				
Silene latifolia (White campion)				
Trifolium pratense (Red clover)				

Sow at 35g/m².

STORAGE BASIN MARGINAL PLANTING				
Planting density to be at 1m wide strip around 10% of basin.				
Species	Form			Mix%
Alopecurus pratensis-aquaticus	plugs 50/100Tray			5
Carex riparia	plugs 50/100Tray			20
Filipendula ulmaria	plugs 50/100Tray			10
Iris pseudacorus	plugs 80/100Tray			20
Juncus effusus	plugs 50/100Tray			15
Myosotis scorpioides	plugs 50/100Tray			15
Veronica beccabunga	containers P7			15

All plants to be of local/British origin. To be planted at 500mm centres.

WILDFLOWER MEADOW				
DLF PRO70 MULTI PURPOSE AMENITY MIX sown at rate of 35g/m ² .				
DLF PRO FLORA 3 DAMP LOAMY SOILS MIX sown at rate of 5g/m ² .				

HEDGE PLANTING				
Species	Height (cm)	Root		
Fagus sylvatica	60-90 cm	BR		

To be planted at 5 plants/m in a double staggered row in a trench pit 500 x 500mm, backfilled as specified. To be mulched to a min depth of 75mm along length. Temporary post and two wire fence to be in place until established. To be maintained at 1.2m height.

GROUND COVER PLANTING (TO TRAIL OVER GABIONS)				
Species	Pot Size	Density per m ²		
A. Antennaria dioica var. 'Valerie Finnis'	0.5L	8		
B. Parnassia quinquefolia	0.5L	8		

To be planted at 300 - 350mm centres at locations shown at the base of the hedge to trail over gabions.

SWALE PLANTING				
MIX A (for base of the bank)				
Species	Pot Size	%		
Carex riparia	0.5L	30		
Juncus effusus	0.5L	30		
Lythrum salicaria	0.5L	20		
Polygonum bistorta	0.5L	20		

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres. Caltha spp. and Filipendula spp. to be planted on the edges of planting areas higher up the bank.

MIX B (for top of the bank and sections higher on slope)				
Species	Pot Size	%		
Achillea millefolium	0.5L	15		
Carex sylvatica	0.5L	35		
Deschampsia cespitosa	0.5L	35		
Lycchnis flos-cuculi	0.5L	15		

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres.

BULBS				
Species	Density %			
Narcissus "Mount Hood"	100			

To be scattered randomly in areas shown at 25 per m².

GRASS - general areas				
DLF PRO70 MULTI PURPOSE AMENITY MIX sown at 35g/m ²				

GRASS - swale				
DLF PRO FLORA 3 DAMP LOAMY SOILS sown at 5g/m ²				

GROUNDABOUT PLANTING				
Species	Pot Size	%		
Rubus 'Betty Ashburner'	0.5L	60		
Rosa 'Flower Carpet Red'	0.5L	40		

To be planted randomly in groups of 3 to 5 at 500mm centres. All mulched to 75mm depth.

Species	Pot Size			
Vinca minor	0.5L			

To be planted at 500mm centres and mulched to 75mm depth.

KEY

- APPLICATION BOUNDARY
- SEMI-MATURE TREE PLANTING
- STANDARD TREE PLANTING
- HEDGE PLANTING
- GRASS
- BULB PLANTING
- WILDFLOWER GRASS
- GROUND COVER PLANTING AT THE TOP OF GABION WALL
- SWALE PLANTING
- SLAB PAVING - MARSHALLS SAXON, NATURAL, 450 x 450 x 63mm, SQUARE COURSE
- STONE FILLED GABION WALL
- 500mm WIDE STONE TRENCH AT BASE OF WALL
- 200mm FRENCH DRAIN
- LIGHTING COLUMNS - REFER TO FABER MAUNSELL Dwg. T53337/1300/001A FOR DETAILS
- TARMAC
- WOODLAND PLANTING
- SHRUB PLANTING
- WETLAND GRASS
- WETLAND GRASS AND MARGINAL PLANTING
- PROPOSED BENCH VEKSO, AP 1004, ASH WOOD 62cm WIDE, 1980cm LONG (FOR BENCH DETAILS REFER TO DRAWING 1777/C50/014)
- GROUND COVER PLANTING
- GROUND COVER PLANTING Vinca minor

Rev 1	27/01/10	Amendments to the planting schedule.
Rev 2	07/01/10	Amendments to the planting at the roundabout.
Rev 3	27/01/10	Amendments to the planting at the roundabout.
Rev 4	28/01/10	Amendments to the planting at the roundabout.
Rev 5	08/03/10	Amendments to the planting at the roundabout.
Rev 6	23/03/10	Amendments to the planting at the roundabout.
Rev 7	24/03/10	Amendments to the planting at the roundabout.
Rev 8	24/03/10	Amendments to the planting at the roundabout.
Rev 9	24/03/10	Amendments to the planting at the roundabout.
Rev 10	24/03/10	Amendments to the planting at the roundabout.
Rev 11	24/03/10	Amendments to the planting at the roundabout.
Rev 12	24/03/10	Amendments to the planting at the roundabout.
Rev 13	24/03/10	Amendments to the planting at the roundabout.
Rev 14	24/03/10	Amendments to the planting at the roundabout.
Rev 15	24/03/10	Amendments to the planting at the roundabout.
Rev 16	24/03/10	Amendments to the planting at the roundabout.
Rev 17	24/03/10	Amendments to the planting at the roundabout.
Rev 18	24/03/10	Amendments to the planting at the roundabout.
Rev 19	24/03/10	Amendments to the planting at the roundabout.
Rev 20	24/03/10	Amendments to the planting at the roundabout.
Rev 21	24/03/10	Amendments to the planting at the roundabout.
Rev 22	24/03/10	Amendments to the planting at the roundabout.
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Rev 24	24/03/10	Amendments to the planting at the roundabout.
Rev 25	24/03/10	Amendments to the planting at the roundabout.
Rev 26	24/03/10	Amendments to the planting at the roundabout.
Rev 27	24/03/10	Amendments to the planting at the roundabout.
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Rev 30	24/03/10	Amendments to the planting at the roundabout.
Rev 31	24/03/10	Amendments to the planting at the roundabout.
Rev 32	24/03/10	Amendments to the planting at the roundabout.
Rev 33	24/03/10	Amendments to the planting at the roundabout.
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Rev 37	24/03/10	Amendments to the planting at the roundabout.
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Rev 46	24/03/10	Amendments to the planting at the roundabout.
Rev 47	24/03/10	Amendments to the planting at the roundabout.
Rev 48	24/03/10	Amendments to the planting at the roundabout.
Rev 49	24/03/10	Amendments to the planting at the roundabout.
Rev 50	24/03/10	Amendments to the planting at the roundabout.

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CAMBRIDGE MEDIPARK LTD

Project:
CBC BOULEVARD
CONDITION 50

Drawing Title:
LANDSCAPE PROPOSALS -
KEY DRAWING

Scale:
1:1000 at A1

Date:
AUGUST 2008

Drawing No.
1777/C50/007J

SEMI-MATURE TREES				
Species	Girth (cm)	Height (cm)	Clear stem height	Root
Platanus x acerifolia	20-25	min. 450	1.8m	RB

Trees to be underground guyed. Refer to 1777/C50/011 for tree pit details.

STANDARD TREE PLANTING					
CODE	SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT	MIN. BRANCHES
AG	<i>Alnus glutinosa</i>	10-12	300-350	BR	4
BP	<i>Betula pubescens</i>	10-12	300-350	BR	3
FE	<i>Fraxinus excelsior</i>	12-14	350-425	BR	4
PA	<i>Prunus avium</i>	10-12	300-350	BR	4
QR	<i>Quercus robur</i>	10-12	300-350	RB	4

WOODLAND PLANTING				
SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT	MIN. BRANCHES
TREES				
Betula pubescens	8-10	250-300	BR	3
Carpinus betulus	10-12	300-350	RB	4
Fraxinus excelsior	8-10	250-300	BR	3
Prunus avium	10-12	300-350	BR	4
Quercus robur	10-12	300-350	RB	4

FEATHERED TREES			
<i>Betula pubescens</i>	175-200	BR	5
<i>Carpinus betulus</i>	150-175	RB	3
<i>Fraxinus excelsior</i>	200-250	BR	5
<i>Prunus avium</i>	175-200	BR	5
<i>Quercus robur</i>	175-200	RB	5

TRANSPLANTS	FORM	HEIGHT (cm)
<i>Acer campestre</i>	1+1	60-80
<i>Cornus sanguinea</i>	1+1	40-60
<i>Corylus avellana</i>	1+1	40-60
<i>Prunus spinosa</i>	1+1	60-80
<i>Euonymus europaeus</i>	1+1	60-80
<i>Viburnum lantana</i>	1+2	40-60
<i>Viburnum opulus</i>	1+2	60-80

Plant standard trees with varying spacings of 2.5m – 4m in groups of 10-20 and fit with a long single stake and spiral guard. Plant feathered trees with 2m spacings in groups of 10-20. Feathered trees to have single stake (1m above ground level) and a 600mm shrub guard. Distribute all tree sizes evenly across the area. Plant transplants with 0.5-2m spacings in groups of 25-75. Fit with a 600mm high spiral guard. All planting to be fitted with a 500 x 500mm biodegradable mulch mat.

SHRUB PLANTING		
SPECIES	FORM	HEIGHT (cm)
<i>Cornus sanguinea</i>	1+1	40-60
<i>Corylus avellana</i>	1+1	40-60
<i>Crataegus monogyna</i>	1+1	60-80
<i>Prunus spinosa</i>	1+1	60-80
<i>Salix caprea</i>	1+1	60-80
<i>Salix cinerea</i>	1+1	60-80
<i>Viburnum opulus</i>	1+2	60-80

Shrubs to be planted randomly in groups 5-7 of the same species at variable spacing of 0.5-2m and fitted with a 600mm high spiral guard and 500 x 500mm biodegradable mulch mat.

GRASS SEED MIX – 80%

Lolium culina (Sheep's fescue)
Lolium culina var. *dumicula* (Tard fescue)
Festuca rubra ssp. *littoralis* (Slender creeping red fescue)
Festuca rubra var. *commutata* (Cheewings fescue)
Agrostis tenuis (Browntop bent)
Agrostis stolonifera (C nesting bent)
Cynosurus cristatus (C rested dog's tail)
Poa trivialis (Rough meadow grass)

Alisma plantago-aquatica (W.)

Angelica sylvestris (Wild angelica)
Asarum canadense (Common Asarum weed)
Dipsacus fullonum (Wild teasel)
Echinum vulgare (Niger's sagebrush)
E. guthriei (Canada thistle) (very aggressive)
Filipendula ulmaria (Lump sum)
Geum (Wild rose)
Heuchera (Coral bells)
Heuchera *monstruosa* (Fragrant)
Comptonia autumnalis (Autumn hawkbit)
Comptonia tomentosa (Rough hunkled)
Leucanthemum vulgare (Oxeye daisy)
Lobelia pedunculata (Crested bird's foot trefoil)
Lythrum flexuosum (Hedge-pink)
Lythrum salicaria (Purple loosestrife)
Malva sylvestris (Black mallow)
Parthenocissus (Roses) (plantain)
Prunella vulgaris (Self-heal)
Ranunculus acris (Meadow Buttercup)
Ranunculus repens (Worm meadow)
Silene dioica (Red campion)
Silene latifolia (White campion)
Stellaria media (Red rose)

Revised manuscript accepted for publication 15 November 2007

ionizing density to be at 1 mm wide strip around 10% of blast

Species	Form	MLX%
<i>Alisma plantago aquatica</i>	plugs 50/100/1ray	5
<i>Carex riparia</i>	plugs 50/100/1ray	20
<i>Ilipendula ulmaria</i>	plugs 50/100/1ray	10
<i>Lil. pendulocoronis</i>	plugs 80/100/1ray	20
<i>Juncus effusus</i>	plugs 50/100/1ray	15
<i>Myosotis scorpioides</i>	plugs 50/100/1ray	15
<i>Veronica beccabunga</i>	container 07	15

All plants to be of local/british origin. To be planted at 500mm centres.

DIF PRO70 MULTI PURPOSE.

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Species	Height (cm)	Root
<i>Fagus sylvatica</i>	60-90 cm	BR

To be planted at 5 plants/m in a double staggered row in a trench pit 500 x 500mm, backfilled as specified. To be mulched to a min depth of 75mm along length. Temporary post and two wire fence to be in place until established. To be maintained at 1.2m height.

GROUND COVER PLANTING (TO TRAIL OVER GABIONS)		
Species	Pot size	Density per m ²
A. <i>Artemisia ludoviciana</i> "Valerie Finnis"	0.5L	8
B. <i>Parthenocissus quinquefolia</i>	0.5L	8

To be planted at 300 – 350mm centres at locations shown at the base of the hedge to trail over gabions.

Species	Pot Size
Carex riparia	0.5L
Juncus effusus	0.5L
Lythrum salicaria	0.5L
Polygonum bistorta	0.5L

...To be planted randomly in groups of 3 to 5 of the same species at 300mm centres. *Caltha* spp. and *Filipendula* spp to be planted on the edges of planting areas higher up the bank.

Species	Pot Size	%
<i>Achillea millefolium</i>	0.5L	15
<i>Carex sylvatica</i>	0.5L	35
<i>Deschampsia caespitosa</i>	0.5L	35

To be planted randomly in groups of 3 to 6 of the same species at 30.0 mm center

BULBS	
Species	Density %
Narcissus "Mount Hood"	100

To be scattered randomly in areas shown at 25 per m²

GRASS – general areas
DLF PRO70 MULTI PURPOSE AMENITY MIX sown at 35g/m²





















GRASS – swale
DLF PRO FLORA 3 DAMP LOAMY SOILS sown at 5g/m²

ROUNDAABOUT PLANTING

**POSSIBLE LOCATIONS
OF GATEWAY
ENTRANCE FEATURES.**

**NO PLANTING OVER
PIPE CONNECTIONS**

APPROVED PLANTING AS
PER ATKINS' DRAWING
5026095/HW/LS/005 -
LANDSCAPE PROPOSALS

- | KEY | |
|---|--|
|  | APPLICATION BOUNDARY |
|  | SEMI-MATURE TREE PLANTING |
|  | STANDARD TREE PLANTING |
|  | HEDGE PLANTING |
|  | GRASS |
|  | BULB PLANTING |
|  | WILDFLOWER GRASS |
|  | GROUND COVER PLANTING AT THE TOP OF GABION WALL |
|  | SWALE PLANTING |
|  | SLAB PAVING - MARSHALLS SAXON, NATURAL, 450 x 450 x 63mm, SQUARE COURSE |
|  | STONE FILLED GABION WALL |
|  | 500mm WIDE STONE TRENCH AT BASE OF WALL |
|  | 200mm FRENCH DRAIN |
|  | LIGHTING COLUMNS - REFER TO FABER MAUNSELL Dwg. T53337/1300/001A FOR DETAILS |
|  | TARMAC |
|  | WOODLAND PLANTING |
|  | SHRUB PLANTING |
|  | WETLAND GRASS |
|  | WETLAND GRASS AND MARGINAL PLANTING |
|  | PROPOSED BENCH VEKSO, AP 1004, ASH WOOD 62cm WIDE, 1980cm LONG (FOR BENCH DETAILS REFER TO DRAWING 1777/C50/014) |

Rev R	271110	Amendments to <u>planting schedule</u> .
Rev R	271120	Land drain amended.
Rev P	180309	Amended to suit Cambridge City Council comments.
Rev D	090309	Amended to suit Cambridge City Council comments.
Rev N	230209	Amendments to suit engineers comments.
Rev M	211108	Revised to Cambridge City Council comments.
Rev L	141108	Revised to Cambridge City Council comments.
Rev H	311008	Amendments to suit CCC comments.
Rev H	311008	Amendments to suit rail level and drainage layout.
Rev H	021008	Amendments to suit rail level and Pump Station layout.
Rev G	080808	Area Amended
Rev F	210708	Amended to suit revised application boundary and drainage layout.
Rev E	210708	Amendments to suit application boundary and drainage layout.
Rev D	020508	Amendments to suit rail level drainage layout.
Rev C	040408	Amendments to suit application boundary.
Rev B	170308	Application line changed from 177350044 to 177350044.
-	120208	Drawing title changed from 17230044 to 1777350044.
A	080807	Amendments to suit revised drainage layout.

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Project

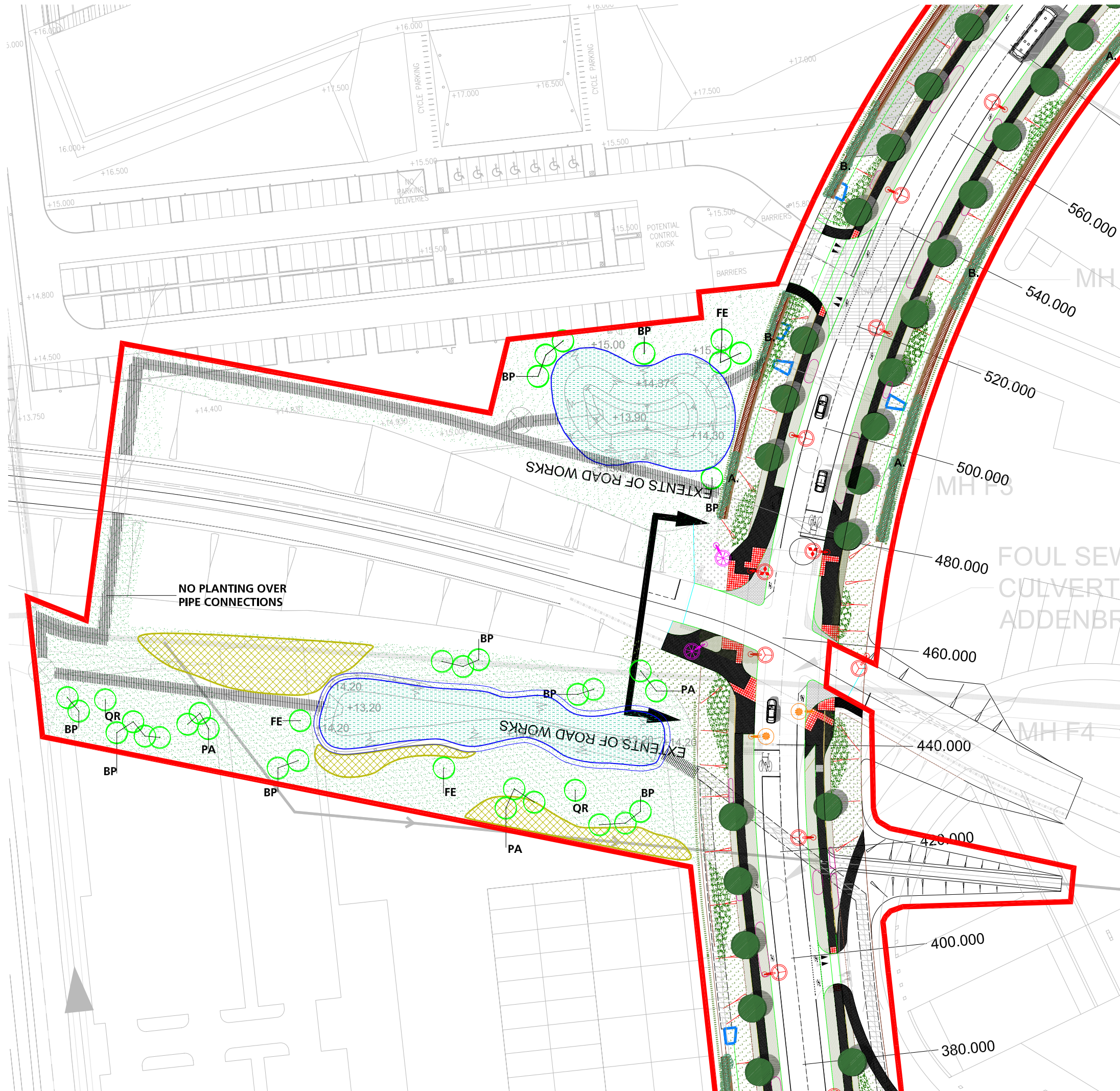
CBC BOULEVARD
CONDITION 50

Drawing Title

**LANDSCAPE PROPOSALS -
SOUTHERN BASINS**

Scale	1:250 at A0	Date	JULY 2007
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Drawing No. **1777/C50/004R**



PLANTING SCHEDULE

SEMI-MATURE TREES

Species	Girth (cm)	Height (cm)	Clear stem height	Root
Platanus x acerifolia	20-25	min. 450	1.8m	RB

Trees to be underground gyled Refer to 1777C/50011 for tree pit details.

STANDARD TREE PLANTING

CODE	SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT	MIN. BRANCHES
AG	Alnus glutinosa	10-12	300-350	BR	4
BP	Betula pubescens	10-12	300-350	BR	3
FE	Fraxinus excelsior	12-14	300-425	BR	4
PA	Prunus avium	10-12	300-350	BR	4
QR	Quercus robur	10-12	300-350	BR	4

Trees to be short triple staked with a 1m dia. circle of mulch around the base of each tree.

WOODLAND PLANTING

SPECIES	GIRTH (cm)	HEIGHT (cm)	ROOT	MIN. BRANCHES	MIX%
TREES					
Betula pubescens	8-10	250-300	BR	3	15
Carpinus betulus	10-12	300-350	RB	4	10
Fraxinus excelsior	8-10	250-300	BR	3	35
Prunus avium	10-12	300-350	BR	4	10
Quercus robur	10-12	300-350	RB	4	30
FEATHERED TREES					
Betula pubescens		175-200	BR	5	20
Carpinus betulus		150-175	RB	3	15
Fraxinus excelsior		200-250	BR	5	30
Prunus avium		175-200	BR	5	15
Quercus robur		175-200	RB	5	20
TRANSPLANTS					
Aster campestre	1+1	60-80			10
Cornus sanguinea	1+1	40-60			15
Corylus avellana	1+1	40-60			25
Prunus spinosa	1+1	60-80			15
Eucryphia nemorosa	1+1	60-80			10
Viburnum lantana	1+2	40-60			5
Viburnum opulus	1+2	60-80			10

Plant standard trees with varying spacings of 2.5m - 4m in groups of 10-20 and fit with a long single stake and spiral guard. Plant feathered trees with 2m spacings in groups of 10-20. Feathered trees to have single stake (1m above ground level) and a 600mm spiral guard. Distribute all tree sizes evenly across the area. Plant transplants with 0.5-2m spacings in groups of 25-75. Fit with a 600mm high spiral guard. All planting to be fitted with a 500 x 500mm biodegradable mulch mat.

SHRUB PLANTING

SPECIES	FORM	HEIGHT (cm)	MIX%
Cornus sanguinea	1+1	40-60	15
Corylus avellana	1+1	40-60	30
Castanea monogyna	1+1	60-80	20
Prunus spinosa	1+1	60-80	10
Salix caprea	1+1	60-80	10
Salix cinerea	1+1	60-80	10
Viburnum opulus	1+2	60-80	5

Shrubs to be planted randomly in groups 5-7 of the same species at variable spacing of 0.5 - 2m and fitted with a 600mm high spiral guard and 500 x 500mm biodegradable mulch mat.

WETLAND GRASS MIX - 80%

Grass seed mix - 80%

Festuca ovina (Sheep fescue)

Festuca ovina var. dunensis (Hard fescue)

Festuca rubra ssp. littoralis (Slender creeping red fescue)

Festuca rubra var. commutata (Cheewings fescue)

Agrostis tenuis (Bromegrass bent)

Agrostis stolonifera (Creeping bent)

Cynosurus cristatus (Crested dog's tail)

Poa trivialis (Rough meadow grass)

WILDFLOWER SEED MIX - 20%

Alchemilla plantago-aquatica (Water plantain)

Angelica sylvestris (Wild angelica)

Centaurea nigra (Common knapweed)

Diapausa fulvum (Wild tassel)

Echium vulgare (Viper's bugloss)

Eupatorium cannabinum (Stem agrimony)

Filipendula ulmaria (Meadowsweet)

Geum rivale (Water anemone)

Hydrocharis morsus-ranae (Frogbit)

Leontodon autumnalis (Autumn hawkbit)

Leontodon hispidus (Rough hawkbit)

Leucanthemum vulgare (Oxeye daisy)

Lotus pedunculatus (Greater bird's foot trefoil)

Lychnis flos-cuculi (Ragged Robin)			
Lythrum salicaria (Purple loosestrife)			
Medicago lupulina (Black medick)			
Plantago lanceolata (Ribwort plantain)			
Prunella vulgaris (Selfheal)			
Ranunculus acris (Meadow buttercup)			
Origanum vulgare (Wild marjoram)			
Silene dioica (Red campion)			
Silene latifolia (White campion)			
Trifolium pratense (Red clover)			

Sow at 25g/m².

STORAGE BASIN MARGINAL PLANTING

Planting density to be at 1m wide strip around 10% of basin.

Species	Form	Mix%
Alisma plantago-aquatica	plugs 50/100Tray	5
Carex riparia	plugs 50/100Tray	30
Filipendula ulmaria	plugs 50/100Tray	10
Iris pseudacorus	plugs 50/100Tray	20
Juncus effusus	plugs 50/100Tray	15
Myosotis scorpioides	plugs 50/100Tray	15
Veronica beccabunga	containers P7	15

All plants to be of local/British origin. To be planted at 500mm centres.

WILDFLOWER MEADOW

DLF PRO10 MULTI PURPOSE AMENITY MIX sown at rate of 25g/m²

DLF PRO FLORA 3 DAMP LOAMY SOILS MIX sown at rate of 5g/m²

HEDGE PLANTING

Species	Height (cm)	Root
Fagus sylvatica	60-90 cm	BR

To be planted at 5 plants/m in a double staggered row in a trench pit 500 x 500mm, backfilled as specified. To be mulched to a min depth of 75mm along length. Temporary post and two wire fence to be in place until established. To be maintained at 1.2m height.

GROUND COVER PLANTING (TO TRAIL OVER GABIONS)

Species	Pot size	Density per m ²
Alchemilla tuberosa 'Valerie Finnis'	0.5L	8
B. parmentaricus quinquefolia	0.5L	8

To be planted at 300 - 350mm centres at locations shown at the base of the hedge to trail over gabions.

SWALE PLANTING

MIX A (For base of the bank)

Species	Pot Size	%
Carex riparia	0.5L	20
Juncus effusus	0.5L	30
Lythrum salicaria	0.5L	20
Polygonum bistorta	0.5L	20

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres. Caltha spp. and Filipendula spp. to be planted on the edges of planting areas higher up the bank.

MIX B (For top of the bank and sections higher on slope)

Species	Pot Size	%
Achillea millefolium	0.5L	15
Carex riparia	0.5L	35
Deschampsia caespitosa	0.5L	35
Lychnis non-stalk	0.5L	15

To be planted randomly in groups of 3 to 5 of the same species at 300mm centres.

BULBS

Species	Density	%
Narcissus 'Mount Hood'	100	

To be scattered randomly in areas shown at 25 per m².

GRASS - general areas

DLF PRO10 MULTI PURPOSE AMENITY MIX sown at 25g/m²

GRASS - swale

DLF PRO FLORA 3 DAMP LOAMY SOILS sown at 25g/m²

- KEY**
- APPLICATION BOUNDARY
 - SEMI-MATURE TREE PLANTING
 - STANDARD TREE PLANTING
 - HEDGE PLANTING
 - GRASS
 - BULB PLANTING
 - WILDFLOWER GRASS
 - GROUND COVER PLANTING AT THE TOP OF GABION WALL
 - SWALE PLANTING
 - SLAB PAVING - MARSHALLS SAXON, NATURAL, 450 x 450 x 63mm, SQUARE COURSE
 - STONE FILLED GABION WALL
 - 500mm WIDE STONE TRENCH AT BASE OF WALL
 - 200mm FRENCH DRAIN
 - LIGHTING COLUMNS - REFER TO FABER MAUNSELL Dwg. T53337/1300/001A FOR DETAILS
 - SHRUB PLANTING
 - WETLAND GRASS
 - WETLAND GRASS AND MARGINAL PLANTING

Rev N 270110 Amendments to planting schedule, Land Drain amendments.
Rev M 270109 Land Drain amendments.
Rev L 080309 Amended to suit Cambridge City Council comments.
Rev K 080309 Amended to suit Metro Southdown Bus.
Rev J 241108 Replied to Cambridge City Council comments.
Rev I 191108 Replied to Cambridge City Council comments.
Rev H 171108 Application boundary revised and amendments to suit CCC comments.
Rev G 311008 Amendments to suit latest boulevard and drainage layout.
Rev F 060808 Base Amended.
Rev E 230708 Application boundary revised.
Rev D 240708 Amended to suit revised application boundary and drainage layout.
Rev C 210708 Amended to suit latest road layout.
Rev B 270308 Amended to suit latest layout Rev B Fords and Harding realigned.
Rev A 170308 Application boundary changed, minor amendments to plant schedule.
170308 Drawing title changed from 1723003 to 1777C/50003.

Revision

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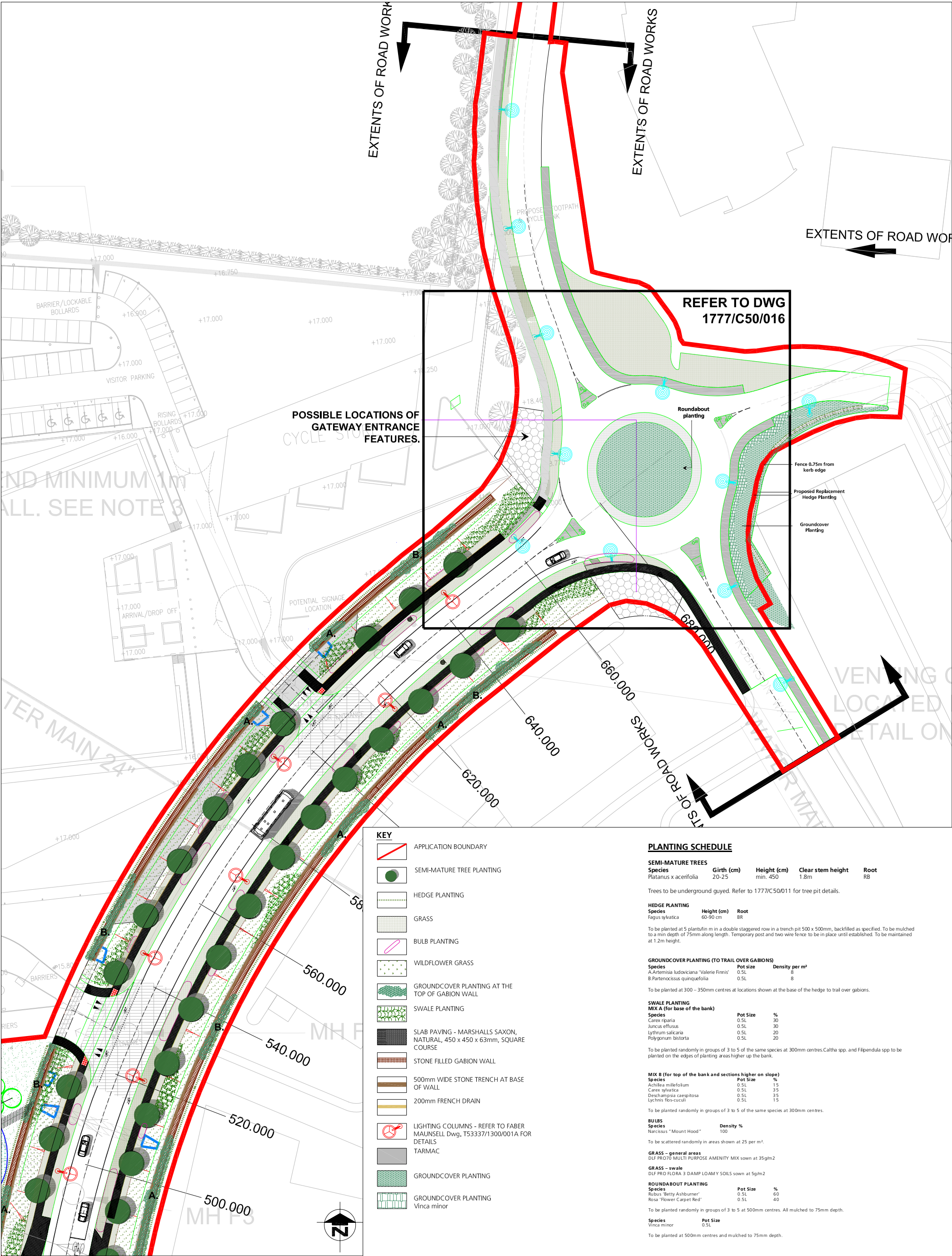
Project:
**CBC BOULEVARD
CONDITION 50**

Drawing Title:
**LANDSCAPE PROPOSALS -
NORTHERN BASINS**

Scale:
1:250 at A0

Date:
AUG 2007

Drawing No.:
1777/C50/003N



Revision

Rev A 250607 Amended to suit latest layout (revD), trees realigned north of the CGB junction, block paving & swale planting amended.

Rev B 120707 Tree planting amended.

Rev C 250707 MRC detail & southern pond area added

Rev D 080807 Application boundary changed.

Rev E 120208 Amendments to suit latest layout (rev F); planting species amended to suit CCC comments; block paving manufacturer changed; drawing title changed from 1723/002E to 1777/C50/002E.

Rev F 170308 Application boundary changed, paving material amended and minor amendments to plant schedule.

Rev G 270308 Additional notes added.

Rev H 020508 Amendments to suit latest boulevard and drainage layout.

Rev I 140708 Revised to Cambridge City Council comments and to suit latest road layout.

Rev K 240708 Revised to suit revised application boundary and drainage layout.

Rev L 060808 Base Amended

Rev M 311008 Amendments to suit latest boulevard and drainage layout.

Rev N 060909 Amended to suit latest boulevard layout.

Rev N 171108 Application boundary revised and amendments to suit CCC comments.

Rev O 191108 Revised to Cambridge City Council comments.

Rev P 241108 Revised to Cambridge City Council comments.

Rev Q 060309 Amended to suit latest boulevard layout.

Rev R 180309 Amended to suit Cambridge City Council comments.

Rev S 271009 Amendments to land drain and northern roundabout design.

Rev T 070110 Amendments planting at the Roundabout.

Rev U 270110 Amendments planting schedule.

Client

CAMBRIDGE MEDIPARK LTD

Project

**CBC BOULEVARD
CONDITION 50**

Drawing Title

LANDSCAPE PROPOSALS

Scale

1:250 at A0

Date

JUNE 2007

Drawing No.

1777/C50/002U

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CBC C50 BOULEVARD - LANDSCAPE SPECIFICATION

23 March 2009

REVISION A

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Q23	GRAVEL/ HOGGIN/ WOODCHIP ROADS/ PAVINGS	5
Q28	TOPSOIL AND GROWING MEDIA	7
Q30	SEEDING/TURFING	9
Q31	EXTERNAL PLANTING	12
R	DISPOSAL SYSTEMS	20
R13	LAND DRAINAGE	21

Q Paving/Planting/Fencing/Site furniture

Q10 Kerbs/ edgings/ channels/ paving accessories

To be read with Preliminaries/General conditions.

TYPES OF KERBS/EDGINGS AND CHANNELS**200 SPECIAL TREE PIT & FRENCH DRAIN EDGING TO AVENUE TREES**

- Manufacturer: Everedge.
 - Product reference: Proedge.
- Size: 125 x 2500mm.
- Type/ Material: Mild Steel.
 - Finish: Unpainted.
 - Colour: -.
- Accessories: -.
- Bedding: -.
- Joints: Interlock sections as to manufacturers instructions.

LAYING**520A ADVERSE WEATHER**

- Conditions: Do not construct if the temperature is below 3°C on a falling thermometer or 1°C on a rising thermometer.

620 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

Q23 Gravel/ hoggin/ woodchip roads/ pavings

To be read with Preliminaries/ General conditions.

TYPES OF SURFACING**110A SELF BINDING GRAVEL TO TOP OF FRENCH DRAIN AND TREE PITS**

- Subgrade improvement layer: Not required.
- Granular sub-base: Not required.
- Blinding to sub-base: Not required.
- Surface course: Angular gravel, free from clay, with sufficient grit to enable compaction.
 - Type: Cedec.
 - Source: CED.
 - Colour: Gold.
 - Size: Graded up to 6mm.
 - Compacted thickness: 50 mm.
- Completion: Compact to produce a firm, regular surface, stable in use.

LAYING**320 SAMPLES**

- Submit: Representative samples of self binding gravel as clause 110A.

330 HERBICIDE TO PAVING Q23/110A

- Type: Suitable for the application, location and conditions of use.
- Weeds and moss: Grub up.
- Application: As section A34, before surfacing.

340 LAYING GENERALLY

- Channels, gullies, etc: Keep clear.
- Finished surfaces:
 - Lines and levels: To prevent ponding.
 - Overall texture: Even.
 - State at completion: Clean.

350A COLD WEATHER WORKING

- Frozen materials: Do not use.
- Freezing conditions: Do not lay pavings.

360 DRAINAGE FALLS

- Sealed surfaces:
 - Falls and cross falls (minimum): 1:40.
 - Camber (minimum): 1:50.
- Unsealed surfaces (minimum): 1:30.

380A LAYING GRANULAR SURFACES IN PEDESTRIAN AREAS

- Permissible deviation from required levels, falls and cambers (maximum): ± 12 mm.
- General: Spread and level to a 50mm thickness.
Water layers thoroughly after initial compaction.
Carry out a final compaction on the saturated surface following a short delay (approx. 30 minutes).
Carry out a further two cycles of watering and rolling in the first week.
Do not use a vibratory roller.

390 PROTECTION FROM TRAFFIC AND PLANT

- Paved areas: Restrict access to prevent damage.

Q28 Topsoil and growing media

To be read with Preliminaries/ General conditions.

- 200 GRADING SUBSOIL
- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
 - Areas of thicker topsoil: Excavate locally.
- 250 SUBSOIL SURFACE PREPARATION
- General: Excavate and/ or place fill to required profiles and levels, as section D20.
 - Loosening:
 - Light and noncohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
 - Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
 - Rock and chalk subgrades: Lightly scarify to promote free drainage.
 - Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
 - Remove Arisings, contaminants and debris and Builders rubble.
- 260 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for areas to receive landscape planting..
 - Notice period: 7 days.
- 330 SURPLUS TOPSOIL TO BE RETAINED
- Generally: Spread and level on site:
 - Locations: Any areas where topsoil is required for new planting.
 - Protected areas: Do not raise soil level within root spread of trees that are to be retained.
- 340 IMPORTED TOPSOIL TO BS 3882
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
 - Standard: To BS 3882.
 - Grade: Premium.
 - Source: Contractor's choice.
 - Submit: Declaration of analysis including information detailing each of the relevant parameters given in BS 3882, clause 6 and table 2.
 - Additional analyses: Not required.
- 395 PEAT
- Peat or products containing peat: Do not use.
- 660 SAMPLE LOAD OF IMPORTED TOPSOIL
- General: Deliver to site a sample load of not less than 5 m³.
 - Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 2 days.

670 CONTAMINATION

- General: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable.
 - Hazardous to human or animal life.
 - Detrimental to healthy plant growth.
- Subsoil: In areas to receive topsoil, do not use subsoil contaminated with the above materials.
- Give notice: If any evidence or symptoms of soil contamination are discovered on the site, or in topsoil to be imported.

680 TOPSOIL STORAGE HEAPS

- Location: as agreed with the CA.
- Height (maximum): 1.5 m.
- Width (maximum): 3.0 m.
- Protection:
 - Do not place any other material on top of storage heaps.
 - Do not allow construction plant to pass over storage heaps.
 - Prevent compaction and contamination, by fencing and covering as appropriate.

690 HANDLING TOPSOIL

- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- Contamination: Do not mix topsoil with:
 - Subsoil, stone, hardcore, rubbish or material from demolition work.
 - Other grades of topsoil.
- Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.

700A SPREADING TOPSOIL

- Temporary roads/surfacing: Remove before spreading topsoil.
- Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Depths after firming and settlement (minimum):
 - 150 mm - grassed areas
 - 300mm - swale planting
 - 450mm - wetland tree & shrub planting
 - 500mm deep trench - hedge planting.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

910A FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: 30 mm.
- Shrub areas: Higher than adjoining grass areas by 25 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115 SEEDED AND TURFED AREAS

- Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
- Appearance: A closely knit, continuous ground cover of even density, height and colour.

120 CLIMATIC CONDITIONS

- General: Carry out the work while soil and weather conditions are suitable.

145 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without displacing seed, seedlings or soil.
- Frequency: As necessary to ensure the establishment and continued thriving of all seeding/turfing.

150 WATER RESTRICTIONS

- Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

160 NOTICE

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Preparing seed bed.
 - Seeding or turfing.
 - Visiting site during maintenance period.
- Period of notice: 1 week.

170 SETTING OUT

- Boundaries: Mark clearly.
- Delineation: In straight lines or smoothly flowing curves as shown on drawings.

PREPARATION

205 PREPARATION MATERIALS

- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.
 - Certified materials: -.
 - Give notice: before ordering or using.

210 HERBICIDE FOR ALL GRASSED AREAS

- Type: Glyphosate based as approved by Natural England and the Environment Agency for use on weeds in or near water bodies.
- Timing: Allow fallow period before cultivation.
 - Duration: As manufacturer's recommendation.

222 SOIL AMELIORANT / CONDITIONER FOR ALL GRASSED AREAS

- Type: Horticultural sand.
- Reference/ Description/ Grading: Contractors choice.
- Samples: Not required.
- Application rate: 2.5 m³/100 m².
- Timing: Apply prior to cultivation.

231 PEAT

- Peat or products containing peat: Do not use.

250 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer: Fully incorporate into topsoil to a depth of 150 mm.
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
 - Depth: 100 mm.
 - Particle size (maximum): 10 mm.
- Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

260 GRADING

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
 - Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150 mm .
- Give notice: If required levels cannot be achieved by movement of existing soil.

270 FERTILIZER FOR SEEDED AREAS EXCEPT PROFLORA 3, WETLAND & CALCAREOUS GRASS AREAS

- Types: Apply both:
 - Superphosphate with a minimum of 18% water soluble phosphoric acid.
 - A sulfate of ammonia with a minimum of 20% nitrogen.
- Application: Before final cultivation and three to five days before seeding/turfing.
- Coverage: Spread evenly, each type at 70 g/m², in transverse directions.

280A FINAL CULTIVATION

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
 - Depth: 25 mm.
 - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
 - Remove surface stones/earth clods exceeding:
 - Wildflower & wetland grass areas: 30 mm.
 - Verge areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

SEEDING**311D GRASS SEED FOR CALCAREOUS GRASS AREA**

- Supplier: Contractor's choice.
 - Mixture reference: Refer to dwg. 1777/C50/004.
- Application rate: 35 g/m².

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- 311C GRASS SEED FOR WETLAND GRASS AREA
- Supplier: Contractor's choice.
 - Mixture: Refer to dwg. 1777/C50/004.
 - Application rate: 35 g/m².
- 311B GRASS SEED FOR SWALE WILDFLOWER AREAS
- Supplier: DLF Trifolium.
 - Mixture reference: PRO FLORA 3 Damp Loamy Soils.
 - Application rate: 5 g/m².
- 311A GRASS SEED FOR FOOTPATH VERGES
- Supplier: DLF Trifolium.
 - Mixture reference: PRO70 Multipurpose Amenity Mix.
 - Application rate: 35 g/m².
- 319 QUALITY OF SEED FOR ALL GRASSED AREAS
- Freshness: Produced for the current growing season.
 - Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations.
 - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
 - Samples of mixtures: Submit when requested.
- 330 SOWING
- General: Establish good seed contact with the root zone.
 - Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
 - Distribution: 2 equal sowings at right angles to each other.
- 335 GRASS SOWING SEASON
- Grass seed generally: April to October.
- 336 WILDFLOWER SOWING SEASON
- Wildflower seed generally: March to May or August to October.
- 340 PRE-EMERGENT HERBICIDE FOR ALL GRASSED AREAS
- Standard: Glyphosate based as approved by Natural England and the Environment Agency for use on weeds in or near water bodies.
 - Application rate: In accordance with manufacturer's written recommendation.
 - Timing: Immediately after sowing.
- PROTECTING/CUTTING**
- 510 PROTECTIVE FENCING
- Fencing type: Chestnut pale fencing to BS 1722-4.
 - Height: 1.1 m.
 - Erection: On completion of seeding/ turfing.
 - Removal: After grass is well established. Fencing will remain the property of the Contractor.

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

- 112 SITE CLEARANCE GENERALLY
- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
 - Stones: Remove those with any dimension exceeding 75 mm.
 - Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
 - Vegetation: Clear scrub to ground level by flail mowing and remove arisings.
 - Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
 - Additional requirements: Remove remnants of old fence posts and mesh.
- 118 SOIL CONDITIONS
- Soil for cultivating and planting: Moist, friable and (excepting aquatic/ marginal planting) not waterlogged.
 - Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.
- 120 CLIMATIC CONDITIONS
- General: Carry out the work while soil and weather conditions are suitable.
 - Strong winds: Do not plant.
- 125A TIMES OF YEAR FOR PLANTING
- Deciduous trees and shrubs: November to February
 - Conifers and evergreens: September/ October or April/ May.
 - Herbaceous plants (including marginal): September/ October or March/ April.
 - Container grown plants: At any time if ground and weather conditions are favourable.
 - Watering and weed control: Provide as necessary.
 - Dried bulbs, corms and tubers: September/ October.
 - Green bulbs: After flowering in spring.
- 130 MECHANICAL TOOLS
- Restrictions: Do not use within 100 mm of tree and plant stems.
- 145 WATERING
- Quantity: Wet full depth of topsoil.
 - Application: Even and without damaging or displacing plants or soil.
 - Frequency: As necessary to ensure establishment and continued thriving of planting.
- 150 WATER RESTRICTIONS
- General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

160 NOTICE

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Delivery of plants/ trees.
 - Planting shrubs.
 - Planting trees into previously dug pits.
 - Watering.
 - Visiting site during maintenance period.
- Period of notice: 1 week.

165 PREPARATION, PLANTING AND MULCHING MATERIALS

- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.
 - Certified materials: -.
 - Give notice before ordering or using.

200 PLANTS/ TREES - GENERAL

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
 - Standard: The National Plant Specification.
- Species: True to name.
- Origin/ Provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved.
Definition: Origin and Provenance have the meaning given in the National Plant Specification.

215 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.

225 BULBS/ CORMS/ TUBERS

- Condition: Firm, entire, not dried out or shrivelled.
- Health: Free from pests, diseases and fungus.
- Handling: Remove from packaging immediately.
- Storage: Permitted only when necessary.
 - Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
 - Duration: Minimum period.
 - Temperature: 18-21°C.

235 CONTAINER GROWN PLANTS/ TREES

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

245 LABELLING AND INFORMATION

- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
 - Full botanical name.
 - Total number.
 - Number of bundles.
 - Part bundles.
 - Supplier's name.
 - Employer's name and project reference.
 - Plant specification, in accordance with scheduled National Plant Specification categories.
- Additional information: Submit on request: Country of origin and Date supplied and consignment details or reference.

260 PLANT/ TREE SUBSTITUTION

- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
 - Price.
 - Difference from specified plants/ trees.
- Approval: Obtain before making any substitution.

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To HTA 'Handling and establishing landscape plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: Coextruded polyethylene bags with black interior and white exterior.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

280 TREATMENT OF TREE WOUNDS

- Cutting: Keep wounds as small as possible.
 - Cut cleanly back to sound wood using sharp, clean tools.
 - Leave branch collars. Do not cut flush with stem or trunk.
 - Set cuts so that water will not collect on cut area.
- Fungicide/ Sealant: Do not apply unless instructed.

285 PROTECTION OF EXISTING GRASS

- General: Protect areas affected by planting operations using boards/ tarpaulins.
 - Excavated or imported material: Do not place directly on grass.
 - Duration: Minimum period.

290 SURPLUS MATERIAL

- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS**305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS**

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by Herbicide (Glyphosate based as approved by Natural England and the Environment Agency for use on weeds in or near water bodies).

341 PEAT

- Peat or products containing peat: Do not use.

359 SOIL AMELIORANT/ CONDITIONER-

- Locations: All planting areas.
- Manufacturer/ Supplier: Alginure products.
 - Product reference: Seanure.
- Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: to manufacturer's recommendations.

375 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
 - Depth: Top 300mm of planting beds.
 - Timing: Within a few days before planting.
 - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: As section Q28.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 75 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

401A REGULAR PLANT LAYOUT -

- Spacing: As drawings 1777/C50/002,003,004.
- Density: As plant schedule.

405 SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Pit bottom improvement Break up to a depth of 50 mm.
- Backfilling material: As clause 476.

415 ANTIDESICCANT FOR CONIFERS/ EVERGREENS

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Application: Dip before delivering to site. Spray soon after planting.
 - Do not apply in wet or frosty weather.
 - Ensure full coverage of underside of foliage.

435 CLIMBING PLANTS USED AS GROUND COVER

- Planting:
 - Canes or other supports: Remove.
 - Arrangement: Spread stems.
- Fixing: Pinned to ground to ensure good contact.

445 PLANTING BULBS/ CORMS/ TUBERS

- Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
- Backfilling: Finely broken soil. Lightly firm to existing ground level.
- Naturalized planting in existing grassed areas:
 - Scattering: Random. Plant bulbs/ corms/ tubers where they fall.
 - Planting: Neatly remove a plug of turf and replace after planting.

470 FORMAL HEDGES

- Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

472 FENCING SUPPORT FOR NEW HEDGES

- Type: Timber post and general pattern wire mesh.
- Standard: To BS 1722-2.
- Height: 600 mm.
- Timing: Before planting hedge.
- Support: Lightly secure hedge plants to fence wires at appropriate intervals.

476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:
- Ameliorant/ Conditioner: TerraEco compost.
 - Application rate: 1 m³ per 10 m³ of topsoil.
- Fertilizer: Enmag CRF.
 - Application rate: Between 7g (small plant) - 45g (large plant) per pit.

480 AFTER PLANTING

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- Top dressing: Not required.
 - Depth: -.

485B MULCHING PLANTING BEDS: HEDGEROW PLANTING

- Material: Coarse grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

485A MULCHING PLANTING BEDS: SWALE PLANTING

- Material: Coarse grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 50 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PLANTING TREES**505C TREE PITS: WETLAND TREE PLANTING**

- Sizes: 1200 mm diameter x 750 mm deep.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a depth of 150 mm.
 - Treatment: Soil ameliorant worked into pit bottoms.
- Pit sides: Scarify.
- Backfilling material: As clause 586.
- Accessories: -.

505B TREE PITS: STANDARD TREE PLANTING

- Sizes: 1650 mm diameter x 1000 mm deep.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a depth of 150 mm.
 - Treatment: Drainage layer as clause 515A.
- Pit sides: Scarify.
- Backfilling material: As clause 586.
- Accessories: - Watering pipe Greenleaf ROOTRAIN CIVIC RRCIVIC 1.

505A TREE PITS: AVENUE PLANTING

- Sizes: As drawing 1777/C50/005.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a depth of 150 mm.
 - Treatment: Drainage layer as clause 515A.
- Pit sides: Scarify.
- Backfilling material: As clause 586.
- Accessories:
 - Underground guying as drawing 1777/C50/005
 - Rootbarriers as clause 510
 - Watering pipe Greenleaf ROOTRAIN CIVIC RRCIVIC 1.

510B TREE PIT ROOT BARRIERS: AVENUE TREES

- Locations: All avenue trees.
- Manufacturer: Greenleaf, Haywood Way, Hastings, East Sussex TN35 4PL. Tel. 01424 717797.
 - Product reference: Root Director RD1050.
- Depth of top of root barrier below finished soil level: 50 mm.
- Installation: With sides vertical.

510A TREE PIT ROOT BARRIERS: AVENUE TREES

- Locations: All avenue trees.
- Manufacturer: Greenleaf, Haywood Way, Hastings, East Sussex TN35 4PL. Tel. 01424 717797.
 - Product reference: Re Root 1000.
- Installation: With sides vertical and ribs facing the tree roots. Use Greenleaf Reroot jointing tape to join roll ends.

512A TREE PIT ACCESSORIES: AVENUE TREES & STANDARD TREE PLANTING

- Locations: All avenue trees.
- Manufacturer: Greenleaf, Haywood Way, Hastings, East Sussex TN35 4PL. Tel. 01424 717797.
 - Product reference: Greenleaf ROOTRAIN CIVIC RRCIVIC 1.
- Type: Perforated plastics irrigation pipe, 60 mm diameter, in circle above and around sides of rootball, with aluminium inlet.

515A TREE PIT DRAINAGE: AVENUE TREES & STANDARD TREE PLANTING

- Depth of excavation: Increase from specified size to allow for aggregate layer.
- Aggregate layer: Clean uncompacted Type 1 backfill 50-75mm DIA
 - Depth: 200 mm.
- Completed pits: Test for free drainage before planting.

525A SEMIMATURE TREES: AVENUE TREES

- Standard: Prepare roots and transplant to BS 4043.
- Backfilling material: As clause 586.
- Support: Underground guying to BS 4043.
- Protection: Not required.

535 STAKING GENERALLY

- Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - Preservative treatment: To provide a 20 year service life.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum):
 - Standard trees - (short triple stakes) 75mm dia.
 - Wetland tree planting - (long single stakes) 50mm dia..

545 LONG SINGLE STAKING FOR WETLAND TREE PLANTING

- Staking: Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting.
 - Backfilling: Consolidate material around stake.
- Height of stakes: Cut off just below lowest branch of tree.
- Ties: Adjustable ties.
- Tying: Secure tree firmly but not rigidly to stake with at least two ties. Use three ties if necessary to prevent tree touching stake.
 - Position: Top tie within 25 mm of top of stake and lower tie approximately halfway down.

575A SHORT TRIPLE STAKING FOR STANDARD TREES

- Staking: Drive stakes vertically at least 600 mm into bottom of pit on either side of tree position before planting.
 - Backfilling: Consolidate material around stakes.
- Height of stakes: Cut to approximately 600 mm above ground level.
- Ties: Adjustable band.
- Tying: Secure tree firmly but not rigidly.

586 TREE BACKFILLING MATERIAL FOR ALL TREES

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Ameliorant/ Conditioner: TerraEco compost.
 - Application rate: 200l per pit.
- Fertilizer: Enmag CRF.
 - Application rate: 75 g/m².

590A MULCHING TREES: STANDARD TREES

- Material: Coarse grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: In a circular area of 500 mm radius measured from the tree stem.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

595A TREE PROTECTION: WETLAND TREE & SHRUB PLANTING

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Type:
 - Trees - spiral guard
 - Feathered - shrub guard
 - Whips - spiral guard .
- Material: Plastics mesh.
- Size:
 - Trees - 0.6m high
 - Feathered - 0.6 m high x 200 mm diameter
 - Whips - 0.6m high.
- Colour: Transparent.
- Support:
 - Trees - Single cane
 - Feathered - Two canes
 - Whips - Single cane.
- General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

597A TREE SPATS/ MULCH MATS: WETLAND TREE & SHRUB PLANTING

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Material: Biodegradable flax.
 - Size: 500 x 500 mm.
- Watering: Water soil thoroughly before laying.
- Laying: In close contact with the soil surface.
 - Fitting: Neatly and closely around tree stem, where necessary cutting a slit or flap.
 - Fixing: Galvanized steel pins, 9 No. per mat at corners and edges.
 - Overlay: Not required.

R **Disposal systems**

R13 Land drainage

To be read with Preliminaries/General conditions.

GENERALLY

100 EXISTING DRAINS AND WATERCOURSES

- Setting out: Before starting work, check invert levels and positions of existing drainage against drawings. Report any discrepancies.
- Drains to be retained: Protect. Maintain normal operation.

DRAINS

201A FILTER DRAINS (AT BASE OF SWALE)

- Trench:
 - Depth: 500mm.
 - Width: 500mm.
- Backfill:
 - Material: Clean stone - at base of gabion wall / swale.
 - Level: To finished ground level at base of swale.

211A FILTER DRAINS WITH PIPE (FRENCH DRAIN & TREE PIT DRAINAGE)

- Trench:
 - Depth: 450mm.
 - Width: 300mm.
- Pipe bedding: Clean stone.
- Pipes: Plastics to BS 4962, Kitemark certified, perforated.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Sizes: 116mm dia..
 - Perforations: Up.
 - Pipes capped at ends of drain runs
 - Provide a junction and connecting pipe with a falling gradient directed into each tree pit.
- Pipe surround and backfill:
 - Material: As pipe bedding.
 - Level: To 50mm below ground level and cover with self binding gravel to ground level as per clause Q23 110 .

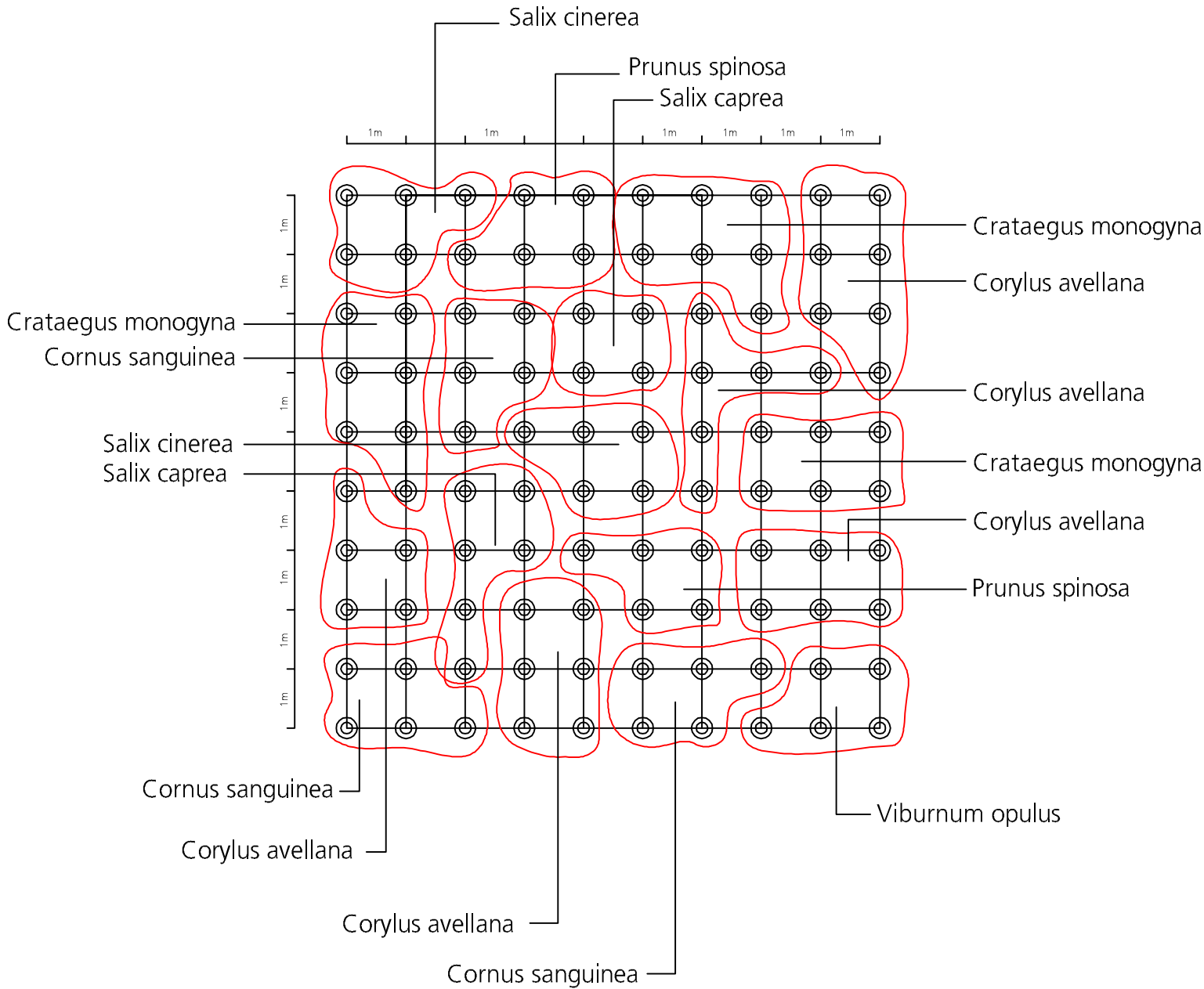
350A LAYING PIPES

- Weather conditions: Lay pipes in good weather using methods suitable for the site conditions.
 - Plastics pipes: Do not lay or backfill at temperatures lower than 5°C.
 - Soil structure: Prevent compaction, smearing, top ponding, rutting and damage.
- General: Lay to line and gradient on a firm bed free from loose soil to give a free-draining installation without backfalls. Do not lay on soil backfill or in slurry.
- Junctions between branches and mains: Purpose made components.
- Upper ends of drain runs: Plug to prevent ingress of soil or animals.
- Backfilling: Do not damage, distort or displace pipes.

EXCAVATING/ BEDDINGS/ SURROUNDS/ BACKFILL

- 500 TOPSOILING
- Filter drains: Do not lay until soiling operations, including spreading and grading of topsoil, have been completed.
 - Segregation: Carefully remove topsoil when forming trenches and prevent mixing with subsoil.
- 505A EXCAVATION
- Pipe gradients: Between 1 in 200 and 1 in 80.
 - Lay pipes with gradient falling away from capped ends.
 - Subsoil: Remove from site or to approved locations at end of each day and before pipe laying. Do not disperse on topsoiled areas.
 - Approved locations: to be determined.
- 520 FORMATION FOR BEDS OR PIPES
- Timing: Excavate to formation immediately before laying beds or pipes.
 - Hard spots: Remove rock projections, boulders, etc. Replace with consolidated bedding material.
 - Soft spots: Tamp in bedding material.
 - Inspection: Give notice of completed excavated formation for each section of the work.
 - Period of notice (minimum): 2 working days.
- 525 GRANULAR BEDS
- Compacted thickness (minimum): 50 mm.
 - Laying pipes: Scoop out locally at couplings and sockets and lay pipes digging slightly into bed and resting uniformly on their barrels.
- 540 GRANULAR SURROUND AND BACKFILL
- Material: Clean gravel, broken stone, hard clinker or slag, with no fines, graded 75 to 20 mm.
- 555 GRANULAR BACKFILLING TO DRAINS WITH PIPES
- General: Not applicable to narrow trenches where a backfill is placed continuously by machine.
 - Placing: in maximum 300 mm thick layers, with mechanical compaction from 300 mm above crown of pipe, up to finished ground level.
 - Surround and backfill material: Do not heap in the trench before spreading.
 - Packing: Carefully pack material around the sides of the pipe. Prevent damage or disruption to pipelines and compact thoroughly.
- 560 GRANULAR BACKFILLING TO DRAINS WITHOUT PIPES
- General: Not applicable to narrow trenches where a backfill is placed continuously by machine.
 - Placing: Backfill in maximum 300 mm thick layers, with mechanical compaction, up to finished ground level.
- 800 CLEANING
- General: Thoroughly flush out the whole of the installation with clean water to remove silt and debris immediately before handover.
 - Washings and detritus: Dispose of safely. Do not discharge into sewers or watercourses.

TYPICAL PLANTING GRID
(Shrub planting)



Plants arranged to create fairly natural pattern.
Over a 10x10m area using this Matrix require the following
plant percentage

SPECIES	FORM	HEIGHT (cm)	MIX%
Cornus sanguinea	1+1	40-60	15
Corylus avellana	1+1	40-60	30
Crataegus monogyna	1+1	60-80	20
Prunus spinosa	1+1	60-80	10
Salix caprea	1+1	60-80	10
Salix cinerea	1+1	60-80	10
Viburnum opulus	1+2	60-80	5

Shrubs to be planted randomly in groups 4 -7 of the same species, fitted
with a 600mm high spiral guard and 500 x 500mm biodegradable mulch
mat.

Revision

DAVID JARVIS ASSOCIATES
planning development landscape environment

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Client:

CAMBRIDGE MEDIPARK LTD

Project:

**CBC BOULEVARD
CONDITION 50**

Drawing Title:

SHRUB PLANTING MATRIX

Scale:

NTS

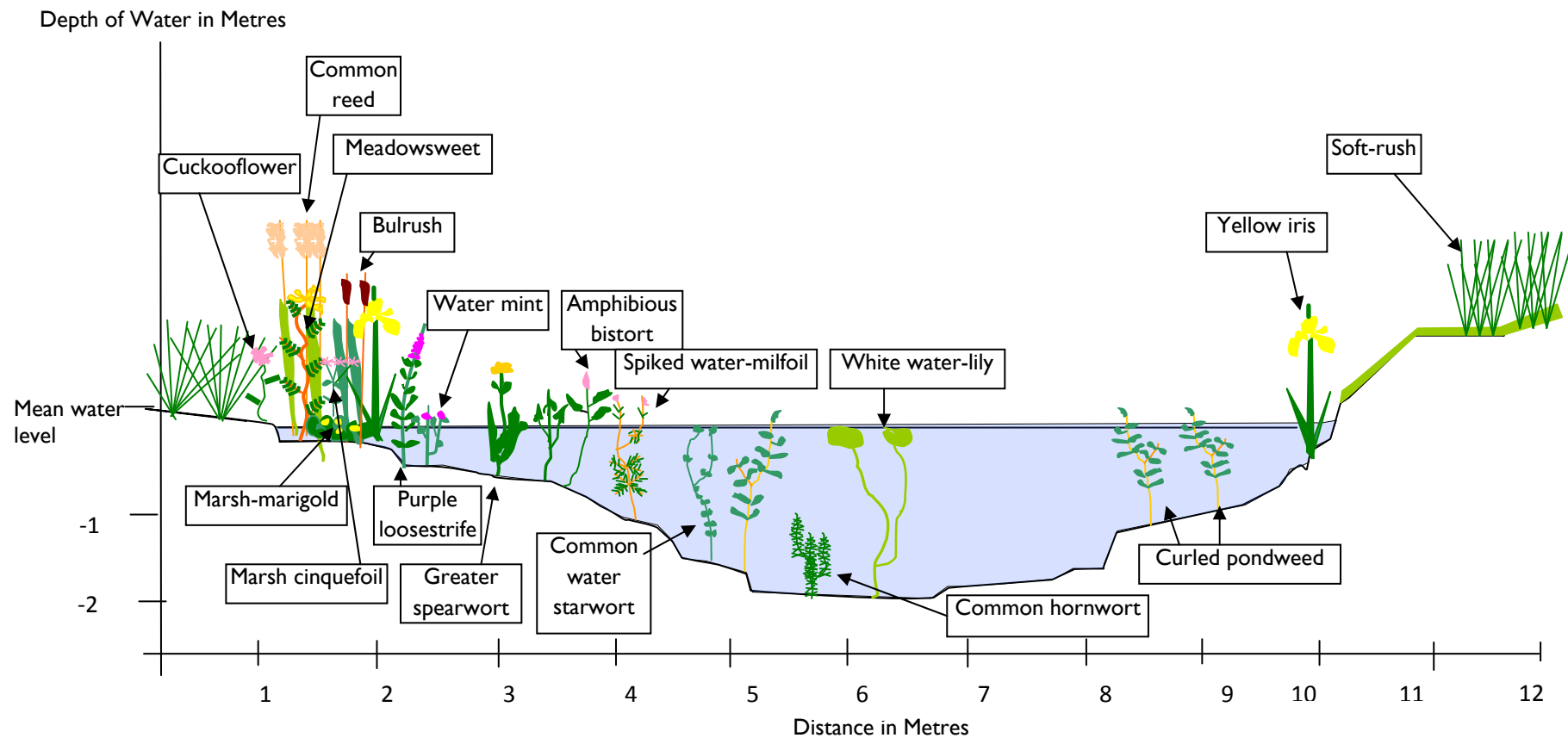
Date:

JAN 2010

Drawing No.:

1777/C50/018

APPENDIX III: DESIGN CODE FOR WATER BODIES



The Rickyard, Newton St Loe,
Bath BA2 9BT
Tel: 01225 874040 Fax: 01225 874554

Client	Countryside Properties
Project	Cambridge Biomedical Campus
Title	Design Code for Water Bodies

APPENDIX IV: EXAMPLE DESIGNS OF BIRD NESTING FEATURES – ONE IN EVERY FOUR BUILDINGS TO SUPPORT TWO INTEGRAL FEATURES

1. Nest boxes will be designed and located so that they provide safety from predators or accidental destruction and protection from adverse weather conditions. For more sensitive species, nest boxes will be located away from sites where human disturbance is likely to be a major factor.
2. The provision of nest boxes will be targeted at species of conservation concern and those species most likely to adopt these structures, i.e. hole nesting birds. Within the development area the following species will be targeted - House Martin and Swift.

House Martin

3. House Martins require soft mud to construct their nests, but will adopt boxes that resemble the nests they build themselves. These should be fixed under the eaves of buildings. They will be sighted so that droppings from the nest do not cause annoyance to householders.



Example of a House Martin nest box

Swift

4. Nesting Swifts are associated almost exclusively with buildings. Recent nest box designs for this species, which mimic bell-tower louvres, have proved to be very successful. Swifts prefer to nest in colonies; so many boxes can be erected together. Recent research has also shown that the provision of a nest-mould within the box increases the occupancy rate. Boxes will be fixed on or within the walls of buildings, under the eaves. An alternative approach involves the use of brick boxes that can be installed when building a house or by chipping out a suitably sized hole in existing brickwork.



Example of a Swift nest box

Appendix 7



PLANTING SCHEDULE

STAGGERED AVENUE TREE PLANTING

Species	Girth (cm)	Root	Size
Fraxinus excelsior (F.exc)	14-16cm	BR	4.25-6m
Tilia cordata (T.cor)	14-16cm	BR	4.25-6m

Trees to be fitted with 3no. 75mm treated softwood stakes driven into the ground and secured with 3no. adjustable rubber ties. Trees to have treegator fitted around the base of the trunk. Provide a 1m dia. circle of mulch (75mm depth) around the base of each tree located within the ground cover planting (eastern line of trees). Trees located within the understory planting (western line of trees) shall be fitted with a 500 x 500mm biodegradeable mulch mat and treegator. Refer to dwg. 1777/C42/003 and 004 for tree pit details.

UNDERSTOREY PLANTING

Species	Size	Age/Form	Root	% Mix
Acer campestre	125-150cm	Feathered, 2x	BR	15
Corylus avellana	60-80cm	1+1	BR	10
Crataegus monogyna	60-80cm	1+1	BR	20
Fraxinus excelsior	300-350cm	10-12cm Selected standard	BR	5
Prunus avium	300-350cm	10-12cm Selected standard	BR	5
Quercus robur	125-150cm	Feathered, 2x	BR	10
Taxus baccata	100-125cm	Leader with laterals, 4x	RB	15
Tilia cordata	300-350cm	10-12cm Selected standard	BR	5

To be planted on a 1.5m grid in groups of 5-7 of the same species. All Corylus and Crataegus fitted with a 600mm high spiral guard. All other species fitted with a 600mm high shelterguard plus. All plants to have a 500 x 500mm biodegradeable mulch mat. Refer to dwg. 1777/C42/004 for tree pit details.

HEDGE PLANTING

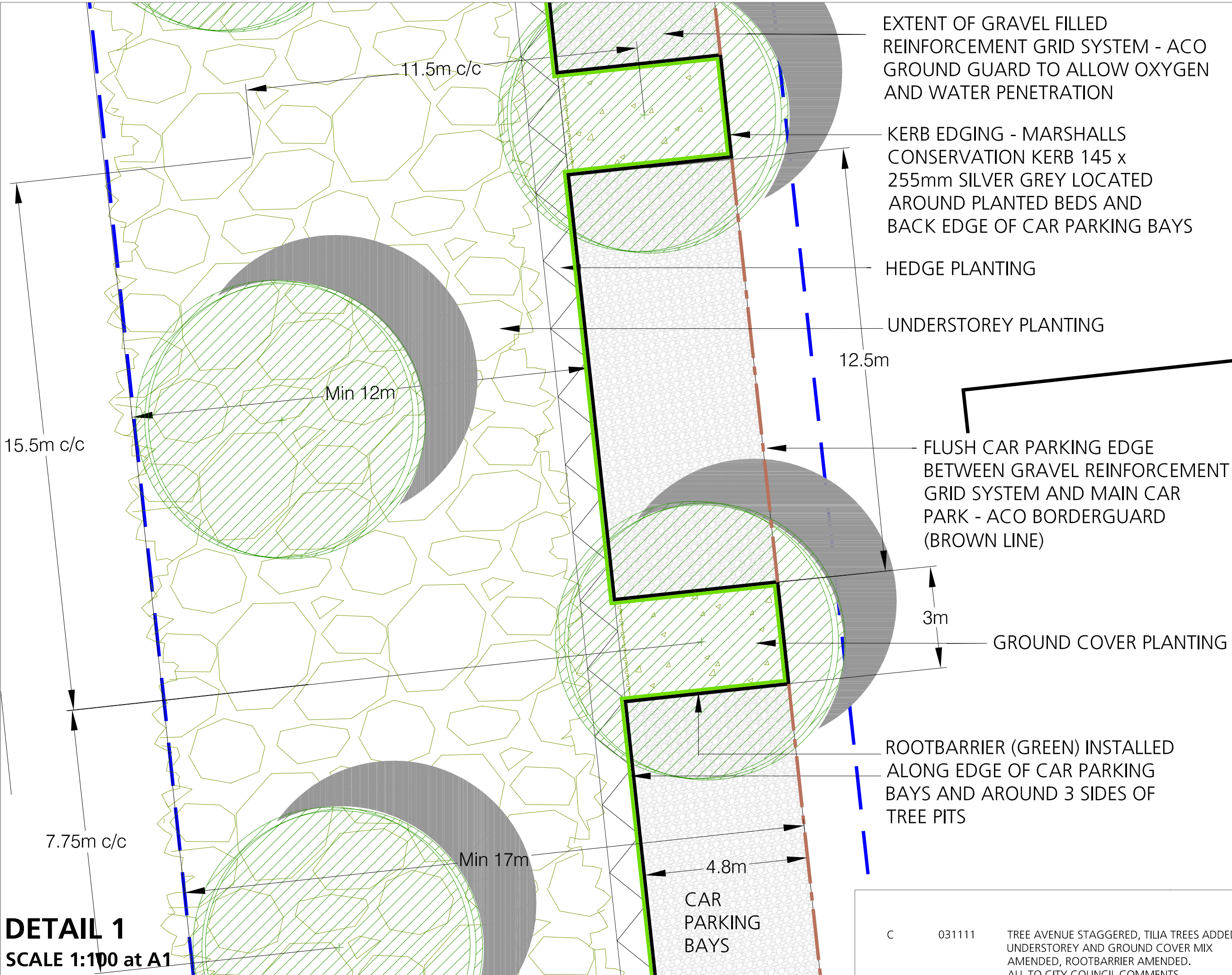
Species	Size	Age/Form	Root	% Mix
Ligustrum vulgaris	45-60cm	1+1	BR	25
Crataegus monogyna	45-60cm	1+1	BR	25
Acer campestre	45-60cm	1+1	BR	25
Carpinus betulus	45-60cm	1+1	BR	25

To be planted in triple staggered rows at 250mm c/c. All fitted with a 600mm high spiral guard. Mulch hedgeline to a min. depth of 75mm. Secure hedgerow with a timber post and wire fence (refer to dwg. 1777/C42/003).

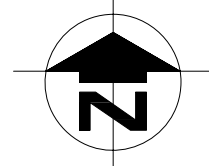
GROUND COVER PLANTING

Species	Size	Pot Size	Supply
Euonymus fortunei 'Dart's Blanket'	20-30cm	2ltr	CG

To be spaced at 450mm intervals (equivalent to 5 plants per m2) and mulched to a min depth of 75mm.



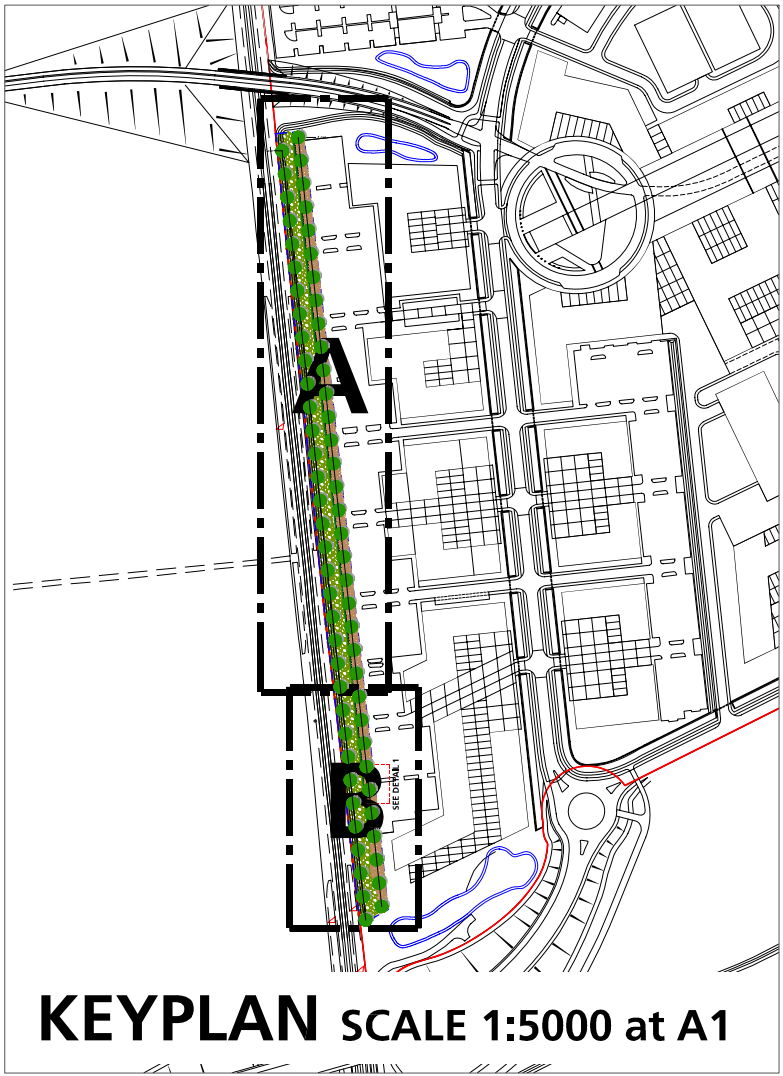
DETAIL 1
SCALE 1:100 at A1



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KEY

- CBC APPLICATION BOUNDARY
- BOUNDARY OF CONDITION 42A
- TREE PLANTING
- UNDERSTOREY PLANTING
- HEDGE PLANTING
- GROUND COVER PLANTING
- GRAVEL FILLED REINFORCEMENT GRID SYSTEM TO CAR PARKING BAYS - ACO GROUND GUARD TILES WITH 6mm GOLDEN FLINT GRAVEL



KEYPLAN SCALE 1:5000 at A1

EXTENT OF GRAVEL FILLED REINFORCEMENT GRID SYSTEM - ACO GROUND GUARD TO ALLOW OXYGEN AND WATER PENETRATION

KERB EDGING - MARSHALLS CONSERVATION KERB 145 x 255mm SILVER GREY LOCATED AROUND PLANTED BEDS AND BACK EDGE OF CAR PARKING BAYS

HEDGE PLANTING

UNDERSTOREY PLANTING

12.5m

FLUSH CAR PARKING EDGE BETWEEN GRAVEL REINFORCEMENT GRID SYSTEM AND MAIN CAR PARK - ACO BORDERGUARD (BROWN LINE)

3m

GROUND COVER PLANTING

4.8m

ROOTBARRIER (GREEN) INSTALLED ALONG EDGE OF CAR PARKING BAYS AND AROUND 3 SIDES OF TREE PITS

C	031111	TREE AVENUE STAGGERED, TILIA TREES ADDED, UNDERSTOREY AND GROUND COVER MIX AMENDED, ROOTBARRIER AMENDED. ALL TO CITY COUNCIL COMMENTS
B	130611	AMENDMENTS TO PLANTING SCHEDULE
A	060910	AMMENED TO CITY COUNCIL COMMENTS

Revision

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Client
CAMBRIDGE MEDIPARK LTD.

Project
**CAMBRIDGE BIOMEDICAL CAMPUS
CONDITION 42A**

Drawing Title
**LANDSCAPE PROPOSALS
WESTERN BOUNDARY**

Scale 1:500 at A1
1:1000 at A3
Date
FEB 2008

Drawing No.
1777/C42/001C